MONTGOMERY & ANDREWS

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July 11, 2008

www.montand.com

Reply to Santa Fe Office

MECEIVED 2 2

HAND-DELIVERED

Mr. David Brooks New Mexico Oil Conservation Division 1220 South St. Francis Drive Santa Fe, NM 87505

Re: NMOCD Case No. 14134, Application of the Board of County Commissioners of Rio Arriba County; and NMOCD Case No. 14141, Application of Approach Operating, LLC, Rio Arriba County, New Mexico

Dear Mr. Brooks:

Enclosed is a set of copies of the C-144's filed with the District II office by Approach Operating, LLC on the Division's C-144 form published on June 24, 2008 for each of the following wells:

Sultemeier Well No. 1 T27N R4E NMPM Lat. 36°642610227 N Long. 106.547435219W

Sena Well No. 1 T28N R4E NMPM Lat. 36°40'08.61650 N Long. 106°30'27.29027"W Mr. David Brooks July 11, 2008 Page 2

> Sena Well No. 2 T28N R4E NMPM Lat. 36°39'25.02004" N Long. 106°30'42.51613" W

Woolley Family LP Well No. 1 T28N R5E NMPM Lat. 36°41'27'88700" N Long. 106°23'11.85392" W

Avella Sultemeier Well No. 2 T28N R4E NMPM Lat. 36°38'41.8" N Long. 106°31'34.3" W

Rosemary Roller Well No. 1 T28N R5E NMPM Lat. 36°40'18.4" N Long. 106°24'41.5" W

Leo Valdez Well No. 1 T28N R4E NMPM Lat. 36°39'47.90" N Long. 106°33'29.18" W

Cloyd Hinkle Well No. 1 T28N R4E NMPM Lat. 36°39'38.46" N Long. 106°33'13.02" W

Anthony Garcia Well No. 1 T28N R4E NMPM Lat. 36°39'37.8" N Long. 106°31'46.3" W

Very truly yours,

7. I wy-dall

J. Scott Hall

JSH/mb Enclosure

cc: Ted Trujillo, Esq. (w/enc.) Adan Trujillo, Esq. (w/enc.)

Form C-144 June 24, 2008

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

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.

For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Pit, Closed-Loop System, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application

Type of action: Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method

Instructions: Please submit one application (Form C-144) per it	idividual pit, closed-loop system, below-grade tank or alternative request
Please be advised that approval of this request does not relieve the operator of lie	ability should operations result in pollution of surface water, ground water or the ply with any other applicable governmental authority's rules, regulations or ordinances.
Operator: ANTMICH Operating 14C.	OGRID#: 248343
Address: 6500 West Freeway	Suite 800, Ft. Worth, TX 76116
Facility or well name: Sultemeier No. 1	
20 000 0 0 10	OCD Permit Number:
U/L or Qtr/Qtr Section/9 Township	8W Range 42 County: <u>Rio Arriba</u>
	Longitude <u>106.547435219₩</u> NAD: 1 927 ☐ 1983
Surface Owner: Tribal Trust or Indian.	,
Pit: Subsection F or G of 19.15.17.11 NMAC	Closed-loop System: Subsection H of 19.15.17.11 NMAC
Temporary: Drilling Workover	Drying Pad Tanks Haul-off Bins Other
☐ Permanent ☐ Emergency ☐ Cavitation ☐ Steel Pit	Lined Unlined
Lined Unlined	Liner type: ThicknessmilLLDPE HDPE PVC
Liner type: Thicknessmil	Other
Other String-Reinforced	Seams: Welded Factory Other
Seams: Welded Factory Other	Volume: <u>UA</u> bbl <u>UA</u> yd³ Dimensions: Length <u>VA</u> x Width <u>VA</u>
Volume:bbl Dimensions: Lx Wx D	Dimensions: Length W/A x Width W/A
Below-grade tank: Subsection I of 19.15.17.11 NMAC	Fencing: Subsection D of 19.15.17.11 NMAC
Volume:bbl	☐ Chain link, six feet in height, two strands of barbed wire at top
Type of fluid:	Four foot height, four strands of barbed wire evenly spaced between one and
Tank Construction material:	four feet
Secondary containment with leak detection	Netting: Subsection E of 19.15.17.11 NMAC
☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off	Screen Netting Other
☐ Visible sidewalls and liner	Monthly inspections
☐ Visible sidewalls only	Signs: Subsection C of 19.15.17.11 NMAC
Other	12'x24', 2' lettering, providing Operator's name, site location, and
Liner type: Thicknessmil HDPE PVC	emergency telephone numbers
Other	Signed in compliance with 19.15.3.103 NMAC
Alternative Method: Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration	Administrative Approvals and Exceptions: Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.
of approval.	Please check a box if one or more of the following is requested, if not leave
	blank: Administrative approval(s): Requests must be submitted to the
	appropriate division district or the Santa Fe Environmental Bureau office for
	consideration of approval. Exception(s): Requests must be submitted to the Santa Fc
	Environmental Bureau office for consideration of approval.

Siting Criteria (regarding permitting): 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.			
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No		
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site			
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image			
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image			
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No		
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality			
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site			
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division			
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map			
Within a 100-year floodplain FEMA map			
Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached. Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC			
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC			
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached. Goologic and Hydrogeologic Data (required for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 Siting Criteria Compliance Demonstrations (required for on-site closure) - based upon the appropriate requirements of 19.15.17.11 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.19 NMAC Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC			
Previously Approved Design (attach copy of design) API Number:			

Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC				
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the do- attached.	cuments are			
Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Climatological Factors Assessment				
Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC				
Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC Onality Control/Onality Assurance Construction and Installation Plan				
Quality Control/Quality Assurance Construction and Installation Plan Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Fisch and Operating Properties Plans, based upon the appropriate requirements of 19.15.17.11 NMAC				
Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Nuisance or Hazardous Odors, including H ₂ S, Prevention Plan				
☐ Emergency Response Plan				
Oil Field Waste Stream Characterization				
☐ Monitoring and Inspection Plan ☐ Erosion Control Plan				
Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC				
Proposed Closure: 19.15.17.13 NMAC	7 Altamatica			
Type: Drilling Workover Emergency Cavitation Permanent Pit Below-grade Tank Closed-loop System	Afternative			
Proposed Closure Method: Waste Excavation and Removal Waste Removal (Closed-loop systems only)				
☐ On-site Closure Method (Only for temporary pits and closed-loop systems) ☐ In-place Burial ☐ On-site Trench Burial	ļ			
Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for con	sideration)			
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC				
Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from				
the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau				
office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.				
	□ Ves □ No			
Ground water is less than 50 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells NA				
Ground water is between 50 and 100 feet below the bottom of the buried waste NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells NA				
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells NA				
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa				
lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site				
	☐ Ycs ☐ No			
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image				
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock vatering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site				
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance	☐ Yes ☐ No			
adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality				
	□ Voc □ No			
Vithin 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site				
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	Yes No			
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	Yes No			
Within a 100-year floodplain FEMA map	☐ Yes ☐ No			

Vaste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the
Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC Postposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings) Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Re-Reclamation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC
Vaste Removal Closure For Closed-loop Systems That Utilize Haul-off Bins Only: (19.15.17.13.D NMAC) Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings.
Disposal Facility Name: Disposal Facility Permit Number: Disposal
Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Construction and Design of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.13 NMAC Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved) Soil Cover Design - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC
Operator Application Certification:
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.
Vame (Print): Price A. Morgan Title: Landman
Signature: 7-9-08
-mail address: byorgan & approachtesources.com Telephone: 317-989-9000
OCD Approval: Permit Application (including closure plan) Closure Plan (only)
OCD Representative Signature: Approval Date:
OCD Representative Signature: Approval Date:
OCD Representative Signature: OCD Permit Number: Closure Report (required within 60 days of closure completion): Closure Method: Waste Excavation and Removal On-Site Closure Method If different from approved plan, please explain.
OCD Permit Number: Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Completion Date: Closure Method: Closure Excavation and Removal On-Site Closure Method Alternative Closure Method If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation)
OCD Permit Number: Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Completion Date: Closure Method: Closure Method Alternative Closure Method If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Usage Material Sampling Analytical Results Usage Material Sampling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Location: Latitude Longitude NAD: 1927 1983
OCD Permit Number: Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Completion Date: Closure Method: Closure Excavation and Removal On-Site Closure Method Alternative Closure Method If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation)
CDD Permit Number:
CDD Permit Number: Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Completion Date: Closure Method: Closure Completion Date: Closure Method: Alternative Closure Method Alternative Closure Method If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Waste Material Sampling Analytical Results Soil Backfilling and Cover Installation Rev-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Location: Latitude Longitude NAD: 1927 1983 Operator Closure Certification: hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and elief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

APPROACH OPERATING, LLC. OPERATIONS PLAN

I. Location:

LAT

Date: June 18, 2008

LONG

Rio Arriba County, NM

Field: Wildcat

Elev: GL

Surface:

II. Drilling

A. Contractor: TBD B. Mud Program:

The surface hole will be drilled with a air, if possible, or fresh water mud.

The production hole will be drilled with air or air/mist.

C. Minimum Blowout Control Specifications:

Double ram type 3000 psi working pressure BOP with a rotating head. See the attached Exhibit # __ for details on the BOP equipment. All ram type preventers and related equipment will be hydraulically tested at nipple-up and after any use under pressure to 1500 psi.

The blind ram will be hydraulically activated and checked for operational readiness each time pipe is pulled out of the hole. All check of the BOP stack and equipment will be noted on the daily drilling report. The BOP equipment will include a kelly cock, floor safety valve, and choke manifold all rated to 2000 psi.

No over pressured zones are expected in this well. No H2S zones expected, but compliance packs will be on location.

III. Logging program: Induction / GR and density logs at TD.

IV. Materials

A. Casing Program:

Hole Size	Depth	Casing Size	Wt & Grade
12-1/4"	350'	9-5/8"	32.3# H-40
8-3/4**	20003	4-1/2"	10.5# J-55

B. Float Equipment

- a. Surface Casing: Notched collar on bottom and 3 centralizers on the bottom 3 joints.
- b. Production Casing: 4-1/2" whirler type cement nosed guide shoe and a float collar on top of the shoe joint. Centralized with bow spring centralizers

V. Cementing:

• Surface Casing: 9-5/8" 32.3 lb/ft H-40 set to 350'.

Cement 0-350'

Fluid 1: Water Based Spacer

Water Fluid Density: 8.330

lbm/gal

Fluid Volume: 10 bbl

Fluid 2: Lead Cement

Premium Cement Fluid Weight 15.600

lbm/gal

94 lbm/sk Premium Cement (Cement) Slurry Yield: 1.180 ft³/sk

0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive) Total Mixing Fluid: 5.238

Gal/sk

2 % Calcium Chloride (Accelerator) Top of Fluid: 0 ft

Calculated Fill: 350 ft

Volume: 42.139 bbl

Calculated Sacks: 200.503 sks

Proposed Sacks: 205 sks

Fluid 3: Water Based Spacer

Water Displacement Fluid Density: 8.330

lbm/gal

Fluid Volume: 23.966 bbl

• Production Casing: 4-1/2" 10.5 lb/ft J-55 casing set to TD.

Cement

Fluid Instructions

Fluid 1: Water Based Spacer

Water Fluid Density: 8.330

lbm/gal

Fluid Volume: 20 bbl

Fluid 2: Lead Cement

50/50 Poz Premium Fluid Weight 13 lbm/gal 0.4 % Halad(R)-344 (Low Fluid Loss Control) Slurry Yield: 1.436 ft³/sk

0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive) Total Mixing Fluid: 6.193

Gal/sk

lbm/gal

5 lbm/sk Gilsonite (Lost Circulation Additive) Top of Fluid: 0 ft

Calculated Fill: 2000 ft

Volume: 156.266 bbl

Calculated Sacks: 610.982 sks Proposed Sacks: 615 sks

Fluid 3: Water Based Spacer

Water Displacement Fluid Density: 8.330

Fluid Volume: 31.197 bbl

• The wells will have 40' of 14" conductor set. Then a 12-1/4" hole will be drilled to about 350' when 9-5/8" surface casing will be set and cemented. We will drill out with a 8-3/4" bit using

MULTI-POINT SURFACE USE PLAN

1. Existing Roads:

When existing roads are used to access the proposed location they will be maintained in the same or better condition than presently found.

2. Planned Access Roads:

Some new access road will have to be constructed. If existing access road is also used, it will be maintained in at least the current condition and will be upgraded where necessary to provide uninterrupted access to the proposed well.

3. Location of Existing Wells:

Attached map (Plat # 1) shows existing wells within one mile radius of the proposed well. N/A

4. Location of Production Facilities:

In the event of production, production facilities will be located on the drill pad. The actual placement of this equipment will be determined when the well's production characteristics can be evaluated after completion.

To protect livestock and wildlife, equipment will be fenced. Any tanks will be enclosed by a dike.

Upon completion of drilling, the location and surrounding area will be cleared of all debris.

5. Water Supply:

Water for drilling and completion will be purchased from local sources.

6. Source of Construction Materials:

No additional construction materials will be required to build.

7. Methods of Handling Waste Disposal:

- a. The drill cuttings, fluids and completion fluids will be placed in the steel tanks. Upon completion, the pad will be leveled, contoured and reseeded with the appropriate seed mixture.
- b. All garbage and trash will be placed in a metal trash basket. It will be hauled off and dumped in an approved land fill upon completion of operations.
- c. Portable toilets will be provided and maintained during drilling operations.

8. Ancillary Facilities:

Ancillary facilities are to be based on well productivity. .

9. Well Site Layout:

A plat of the drill pad with location of drilling equipment and rig orientations also attached.

10. Plans for Restoration of Surface:

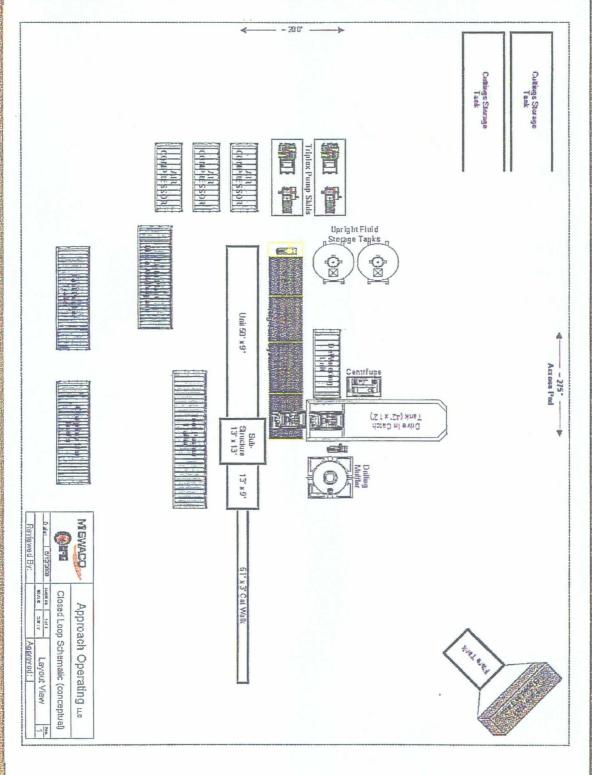
When the well is abandoned the location and access road will be cleaned and restored to the original topographical contours as much as possible. The area will be reseeded with appropriate seed mixture.

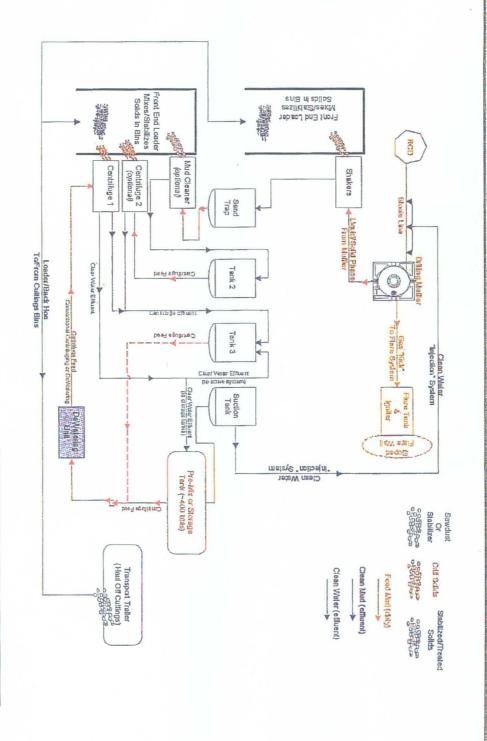
If the well is productive, areas not used in production will be contoured and seeded with stipulated seed mixture. Production equipment will be painted to blend with the natural color of the landscape.

11. Lessee's or Operator's Representative:

Glenn W. Reed, Executive Vice President – Engineering & Operations Approach Resources 6500 West Freeway, Suite 800 Fort Worth, Texas 76116 Phone: (817) 989-9000

Glenn W. Reed
Executive Vice President – Engineering & Operations





			lewed By:	Review
LIOW LIOCES	7.5": 1	SCAR:		
	1 0/1	Pach No	8000/2/10	Dalas
Closed Loop Schematic (conceptual	sed Loo	Clo		
Approach Operating LLG	Appro		ACO	MEM

Form C-144 June 24, 2008

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 Department Oil Conservation Division 1220 South St. Francis Dr.

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.

For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Pit, Closed-Loop System, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application

Santa Fe, NM 87505

Type of action: Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances. Address: 6500 West Freeway, Suite 800, Ft. Worth, 7x 76116 Facility or well name: Sena No. 1 30-039-30386 OCD Permit Number: API Number: U/L or Qtr/Qtr M Section 10 Township 28N Range 42 County: Rio Arriba Center of Proposed Design: Latitude 36° 40' 8.6165" N Longitude 106° 30' 27.2902" W NAD: 1927 1983 Surface Owner: Federal State Private Tribal Trust or Indian Allotment Pit: Subsection F or G of 19.15.17.11 NMAC Closed-loop System: Subsection H of 19.15.17.11 NMAC ☐ Drying Pad 【X Tanks ☐ Haul-off Bins ☐ Other _____ Temporary: Drilling Workover Permanent Emergency Cavitation Steel Pit Lined Unlined Liner type: Thickness \mathcal{N}/A mil LLDPE HDPE PVC Lined Unlined Other _____ String-Reinforced Seams: Welded Factory Other Seams: Welded Factory Other Dimensions: Length WA x Width WA Volume: bbl Dimensions: L x W x D Below-grade tank: Subsection I of 19.15.17.11 NMAC Fencing: Subsection D of 19.15.17.11 NMAC Volume: _____bbl Chain link, six feet in height, two strands of barbed wire at top Type of fluid: Four foot height, four strands of barbed wire evenly spaced between one and Tank Construction material: Secondary containment with leak detection Netting: Subsection E of 19.15.17.11 NMAC Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off Screen Netting Other ☐ Visible sidewalls and liner Monthly inspections ☐ Visible sidewalls only Signs: Subsection C of 19.15.17.11 NMAC Other ____ 12'x24', 2' lettering, providing Operator's name, site location, and Liner type: Thickness mil HDPE PVC emergency telephone numbers Other ☐ Signed in compliance with 19.15.3.103 NMAC Alternative Method: Administrative Approvals and Exceptions: Submittal of an exception request is required. Exceptions must be Justifications and/or demonstrations of equivalency are required. Please refer to submitted to the Santa Fe Environmental Bureau office for consideration 19.15.17 NMAC for guidance. of approval. Please check a box if one or more of the following is requested, if not leave Administrative approval(s): Requests must be submitted to the

consideration of approval.

appropriate division district or the Santa Fe Environmental Bureau office for

Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

Siting Criteria (regarding permitting): 19.15.17.10.NMAC		
Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.		
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No	
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No	
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No ☐ NA	
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image		
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No	
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. Written confirmation or verification from the municipality; Written approval obtained from the municipality	Yes No	
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site		
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division		
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	Yes No	
Within a 100-year floodplain FEMA map	Yes No	
Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application: Please indicate, by a check mark in the box, that the documents are attached. Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC		
Clared Land Charles and Charles Dec 10 15 17 0 NMAC		
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the do attached. Geologic and Hydrogeologic Data (required for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of Siting Criteria Compliance Demonstrations (required for on-site closure) - based upon the appropriate requirements of 19.15.17.10 Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC	19.15.17.9	
Previously Approved Design (attach copy of design) API Number:		

Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC				
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the do	ocuments are			
Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Climatological Factors Assessment Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC Quality Control/Quality Assurance Construction and Installation Plan Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Nuisance or Hazardous Odors, including H ₂ S, Prevention Plan Einergency Response Plan Oil Field Waste Stream Characterization Monitoring and Inspection Plan Erosion Control Plan Erosion Control Plan Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC				
Proposed Closure: 19.15.17.13 NMAC				
Type: Drilling Workover Emergency Cavitation Permanent Pit Below-grade Tank Closed-loop System Alternative				
Proposed Closure Method: Waste Excavation and Removal Waste Removal (Closed-loop systems only) On-site Closure Method (Only for temporary pits and closed-loop systems) In-place Burial On-site Trench Burial Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for contents.	nsideration)			
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC				
Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.				
Ground water is less than 50 feet below the bottom of the buried waste. NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells NA				
Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells NA				
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells Yes No NA				
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa ake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site				
Vithin 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image				
Vithin 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock vatering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site				
Vithin incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance dopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality				
Vithin 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site □ Yes □ No				
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No			
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No			
Within a 100-year floodplain FEMA map	☐ Yes ☐ No			

Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached. Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings) Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC
Waste Removal Closure For Closed-loop Systems That Utilize Haul-off Bins Only: (19.15.17.13.D NMAC) Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Disposal Facility Name: TWI Elvironmental Inc. Disposal Facility Permit Number: LIM - 01-0008
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Construction and Design of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved) Soil Cover Design - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
Operator Application Certification:
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.
Name (Print): Brice A. Morgan Title: Landman
Name (Print): Brice A. Morgan Title: Landman Signature: 5A.M. Date: 7-9-08
e-mail address: by organ & approachse sources.com Telephone: 817-989-9000
OCD Approval: Permit Application (including closure plan) Closure Plan (only)
Closure Plan (only)
OCD Representative Signature: Approval Date:
OCD Representative Signature: OCD Permit Number: Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Completion Date:
OCD Representative Signature: OCD Permit Number: OCD Permit Number: OCD Permit Number: OCD Permit Num
OCD Representative Signature: Approval Date:
Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Completion Date: Closure Method: Closure Completion Date: Closure Method: Alternative Closure Method Alternative Closure Method If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice Proof of Dead Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Location: Latitude Longitude NAD: 1927 1983 Operator Closure Certification:
Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Completion Date: Closure Method: Closure Excavation and Removal On-Site Closure Method Alternative Closure Method If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Waste Material Sampling Analytical Results Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Location: Latitude Longitude NAD: 1927 1983
Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Completion Date: Closure Method: Closure Completion Date: Closure Method If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Contined attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and
Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Completion Date: Closure Method: Closure Method: Closure Completion Date: Closure Method If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Location: Latitude Longitude NAD: 1927 1983 Departor Closure Certification: hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and helief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

APPROACH OPERATING, LLC. OPERATIONS PLAN

I. Location:

LAT

Date: June 18, 2008

LONG

Rio Arriba County, NM

Field: Wildcat

Elev: GL

Surface:

II. Drilling

A. Contractor: TBD B. Mud Program:

The surface hole will be drilled with a air, if possible, or fresh water mud.

The production hole will be drilled with air or air/mist.

C. Minimum Blowout Control Specifications:

Double ram type 3000 psi working pressure BOP with a rotating head. See the attached Exhibit # __ for details on the BOP equipment. All ram type preventers and related equipment will be hydraulically tested at nipple-up and after any use under pressure to 1500 psi.

The blind ram will be hydraulically activated and checked for operational readiness each time pipe is pulled out of the hole. All check of the BOP stack and equipment will be noted on the daily drilling report. The BOP equipment will include a kelly cock, floor safety valve, and choke manifold all rated to 2000 psi.

No over pressured zones are expected in this well. No H2S zones expected, but compliance packs will be on location.

III. Logging program: Induction / GR and density logs at TD.

IV. Materials

A. Casing Program:

Hole Size	Depth	Casing Size	Wt & Grade
12-1/4"	350'	9-5/8:	32.3# H-40
8-3/4**	2000	4-1/2"	10.5# J-55

B. Float Equipment

- a. Surface Casing: Notched collar on bottom and 3 centralizers on the bottom 3 joints.
- b. Production Casing: 4-1/2" whirler type cement nosed guide shoe and a float collar on top of the shoe joint. Centralized with bow spring centralizers

V. Cementing:

• Surface Casing: 9-5/8" 32.3 lb/ft H-40 set to 350'.

Cement 0-350'

Fluid 1: Water Based Spacer

Water Fluid Density: 8.330

lbm/gal Fluid Volume: 10 bbl

Fluid 2: Lead Cement

Premium Cement Fluid Weight 15.600

lbm/gal

94 lbm/sk Premium Cement (Cement) Slurry Yield: 1.180 ft³/sk

0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive) Total Mixing Fluid: 5.238

Gal/sk

2 % Calcium Chloride (Accelerator) Top of Fluid: 0 ft

Calculated Fill: 350 ft

Volume: 42.139 bbl

Calculated Sacks: 200.503 sks

Proposed Sacks: 205 sks

Fluid 3: Water Based Spacer

Water Displacement Fluid Density: 8.330

lbm/gal

Fluid Volume: 23.966 bbl

• Production Casing: 4-1/2" 10.5 lb/ft J-55 casing set to TD.

Cement

Fluid Instructions

Fluid 1: Water Based Spacer

Water Fluid Density: 8.330

lbm/gal

Fluid Volume: 20 bbl

Fluid 2: Lead Cement

50/50 Poz Premium Fluid Weight 13 lbm/gal 0.4 % Halad(R)-344 (Low Fluid Loss Control) Slurry Yield: 1.436 ft³/sk

0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive) Total Mixing Fluid: 6.193

Gal/sk

5 lbm/sk Gilsonite (Lost Circulation Additive) Top of Fluid: 0 ft

Calculated Fill: 2000 ft

Volume: 156.266 bbl

Calculated Sacks: 610.982 sks

Proposed Sacks: 615 sks.

Fluid 3: Water Based Spacer

Water Displacement Fluid Density: 8.330

lbm/gal

Fluid Volume: 31.197 bbl

• The wells will have 40' of 14" conductor set. Then a 12-1/4" hole will be drilled to about 350' when 9-5/8" surface casing will be set and cemented. We will drill out with a 8-3/4" bit using

MULTI-POINT SURFACE USE PLAN

1. Existing Roads:

When existing roads are used to access the proposed location they will be maintained in the same or better condition than presently found.

2. Planned Access Roads:

Some new access road will have to be constructed. If existing access road is also used, it will be maintained in at least the current condition and will be upgraded where necessary to provide uninterrupted access to the proposed well.

3. Location of Existing Wells:

Attached map (Plat # 1) shows existing wells within one mile radius of the proposed well. N/A

4. Location of Production Facilities:

In the event of production, production facilities will be located on the drill pad. The actual placement of this equipment will be determined when the well's production characteristics can be evaluated after completion.

To protect livestock and wildlife, equipment will be fenced. Any tanks will be enclosed by a dike.

Upon completion of drilling, the location and surrounding area will be cleared of all debris.

5. Water Supply:

Water for drilling and completion will be purchased from local sources.

6. Source of Construction Materials:

No additional construction materials will be required to build.

7. Methods of Handling Waste Disposal:

- a. The drill cuttings, fluids and completion fluids will be placed in the steel tanks. Upon completion, the pad will be leveled, contoured and reseeded with the appropriate seed mixture.
- b. All garbage and trash will be placed in a metal trash basket. It will be hauled off and dumped in an approved land fill upon completion of operations.
- c. Portable toilets will be provided and maintained during drilling operations.

8. Ancillary Facilities:

Ancillary facilities are to be based on well productivity. . .

9. Well Site Layout:

A plat of the drill pad with location of drilling equipment and rig orientations also attached.

10. Plans for Restoration of Surface:

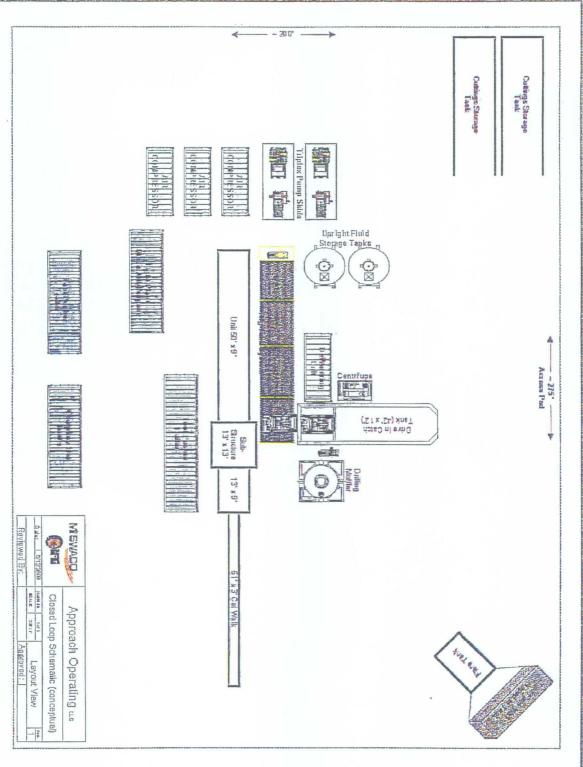
When the well is abandoned the location and access road will be cleaned and restored to the original topographical contours as much as possible. The area will be reseeded with appropriate seed mixture.

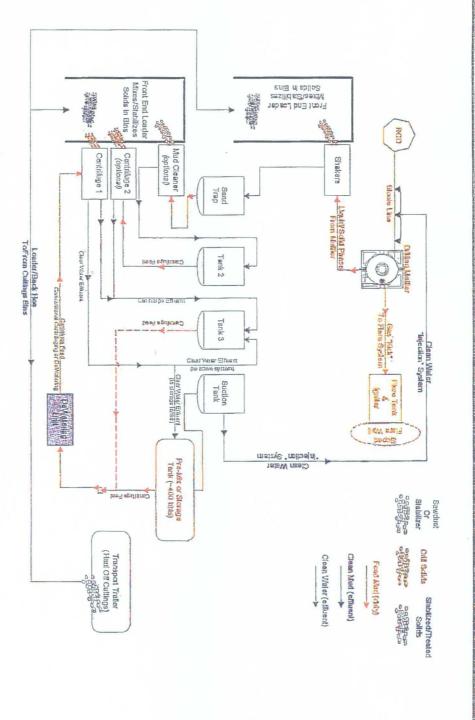
If the well is productive, areas not used in production will be contoured and seeded with stipulated seed mixture. Production equipment will be painted to blend with the natural color of the landscape.

11. Lessee's or Operator's Representative:

Glenn W. Reed, Executive Vice President – Engineering & Operations Approach Resources 6500 West Freeway, Suite 800 Fort Worth, Texas 76116 Phone: (817) 989-9000

Glenn W. Reed
Executive Vice President – Engineering & Operations





Reviewed By:		600000 W		MISWACO
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Approved:	וומא ודוסטפטפ		Closed Loop Schematic (conceptual)	pproach Operating
	-	Mari		

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

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.

For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Pit, Closed-Loop System,	Below-Grade Tank, or
Proposed Alternative Method Per	mit or Closure Plan Application

Type of action: Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method

Closure of a pit, closed-loop	system, below-grade tank, or proposed alternative method
• • • • • • • • • • • • • • • • • • • •	ndividual pit, closed-loop system, below-grade tank or alternative request
environment. Nor does approval relieve the operator of its responsibility to com	ability should operations result in pollution of surface water, ground water or the ply with any other applicable governmental authority's rules, regulations or ordinances.
Operator: Allstoach Oberating, LC	ogrid#: 248343 300, Ft. Worth, TX 76116
Address: 6500 West Freeway, Suite 8	300, Ft. Worth, TX 76/16
Facility or well name: Sena Ub. 2	
API Number: 30-039-30394	OCD Permit Number:
U/L or Qtr/Qtr A Section 16 Township 25	OCD Permit Number: 3N Range 42 County: Lio Arriba
Center of Proposed Design: Latitude 36° 39'25.02004 K	Longitude 106° 30′42.516″ W NAD: 51927 ☐ 1983
Surface Owner: Federal State Private Tribal Trust or Indian	Allotment
Pit: Subsection F or G of 19.15.17.11 NMAC	Closed-loop System: Subsection H of 19.15.17.11 NMAC
Temporary: Drilling Workover	Drying Pad Tanks Haul-off Bins Other
☐ Permanent ☐ Emergency ☐ Cavitation ☐ Steel Pit	☐ Lined ☐ Unlined
Lined Unlined	Liner type: ThicknessmilLLDPE HDPE PVC
Liner type: Thicknessmil	Other
Other String-Reinforced	Seams: Welded Factory Other
Seams: Welded Factory Other	Volume: N/A bbl N/A yd3
Volume: bbl Dimensions: L x W x D	Volume: N/A bbl N/A yd³ Dimensions: Length N/A x Width N/A
Below-grade tank: Subsection I of 19.15.17.11 NMAC	Fencing: Subsection D of 19.15.17.11 NMAC
Volume:bbl	Chain link, six feet in height, two strands of barbed wire at top
Type of fluid:	Four foot height, four strands of barbed wire evenly spaced between one and
Tank Construction material:	four feet
Secondary containment with leak detection	Netting: Subsection E of 19.15.17.11 NMAC
☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off	Screen Netting Other
☐ Visible sidewalls and liner	Monthly inspections
☐ Visible sidewalls only	Signs: Subsection C of 19.15.17.11 NMAC
Other	12'x24', 2' lettering, providing Operator's name, site location, and
Liner type: Thicknessmil	emergency telephone numbers
Other	Signed in compliance with 19.15.3.103 NMAC
Alternative Method:	Administrative Approvals and Exceptions:
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration	Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.
of approval.	Please check a box if one or more of the following is requested, if not leave
	blank: Administrative approval(s): Requests must be submitted to the
	appropriate division district or the Santa Fe Environmental Bureau office for
	consideration of approval. Exception(s): Requests must be submitted to the Santa Fe
	Environmental Bureau office for consideration of approval.

Siting Criteria (regarding permitting): 19.15.17.10 NMAC Instructions: The applicant must deponstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.	
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	Yës No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	Yes No
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No ☐ NA
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	Yes No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	Yes No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	Yes No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	Yes No
Within a 100-year floodplain. - FEMA map	☐ Yes ☐ No
Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the do attached. Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.5 Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC Previously Approved Design (attach copy of design) API Number:	9 NMAC
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC	
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the do attached. Geologic and Hydrogeologic Data (required for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of Siting Criteria Compliance Demonstrations (required for on-site closure) - based upon the appropriate requirements of 19.15.17.10 Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC	19.15.17.9
Previously Approved Design (attach copy of design) API Number:	

Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC	
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the do attached.	ocuments are
Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Climatological Factors Assessment	!
☐ Certified Engineering Design Plans based upon the appropriate requirements of 19.15.17.11 NMAC ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC ☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC	:
☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC Quality Control/Quality Assurance Construction and Installation Plan	
Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC	
Nuisance or Hazardous Odors, including H ₂ S, Prevention Plan	
Emergency Response Plan Oil Field Waste Stream Characterization	
☐ Monitoring and Inspection Plan ☐ Erosion Control Plan	
Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC	
Proposed Closure: 19.15.17.13 NMAC	7 Alt
Type: Drilling Workover Emergency Cavitation Permanent Pit Below-grade Tank Closed-loop System Proposed Closure Method: Waste Excavation and Removal] Alternative
Waste Removal (Closed-loop systems only)	
☐ On-site Closure Method (Only for temporary pits and closed-loop systems) ☐ In-place Burial ☐ On-site Trench Burial	
Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for co	nsideration)
Siting Criteria (regarding on-site closure methods only): 19:15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10	
NMAC for guidance.	
Ground water is less than 50 feet below the bottom of the buried waste: - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No
Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	Yes No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. NM. Office of the State Engineer - iWATERS database, Visual inspection (certification) of the proposed site	Yes No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	Yes No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within the area overlying a subsurface mine. Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geölögŷ & Mineral Resources; ÚSGS; NM Geological Society; Topographic map	Yes No
Within a 100-year-floodplain.	☐ Yes ☐ No

·
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached. Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings) Soil Backfill and Gover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC
Waste Removal Closure For Closed-loop Systems That Utilize Haul-off Bins Only: (19.15.17.13.D NMAC) Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Disposal Facility Name: Number: NM-01-000 8 On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate,
On-Site Closure Plan Checklist: (1945-1713 NMAC) Instructions: Fach of the following items must be attached to the closure plan. Please indicate.
by a check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Construction and Design of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.13 NMAC Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved) Soil Cover Design - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC
Operator Application Certification:
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.
Name (Print): Brice A. Horgan Title: Landman Signature: Date: 7-9-08
e-mail address: bMorgan@approachtesources.com Telephone: 817-989-9000
OCD Approval: Permit Application (including closure plan) Closure Plan (only)
OCD Representative Signature: Approval Date:
Title: OCD Permit Number:
Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Completion Date:
Closure Method: Waste Excavation and Removal On-Site Closure Method Alternative Closure Method If different from approved plan, please explain.
Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique
Site Reclamation (Photo Documentation) On-site Closure Location: Latitude Longitude NAD: 1927 1983
On-site Closure Location: Latitude Longitude NAD: 1927 1983
On-site Closure Location: Latitude Longitude NAD: 1927 1983 Operator Closure Certification: Thereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and
On-site Closure Location: Latitude Longitude NAD: 1927 1983 Operator Closure Certification: Thereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

APPROACH OPERATING, LLC. OPERATIONS PLAN

I. Location:

LAT

Date: June 18, 2008

LONG

Rio Arriba County, NM

Field: Wildcat

Elev: GL

Surface:

II. Drilling

A. Contractor: TBD B. Mud Program:

The surface hole will be drilled with a air, if possible, or fresh water mud.

The production hole will be drilled with air or air/mist.

C. Minimum Blowout Control Specifications:

Double ram type 3000 psi working pressure BOP with a rotating head. See the attached Exhibit #__ for details on the BOP equipment. All ram type preventers and related equipment will be hydraulically tested at nipple-up and after any use under pressure to 1500 psi.

The blind ram will be hydraulically activated and checked for operational readiness each time pipe is pulled out of the hole. All check of the BOP stack and equipment will be noted on the daily drilling report. The BOP equipment will include a kelly cock, floor safety valve, and choke manifold all rated to 2000 psi.

No over pressured zones are expected in this well. No H2S zones expected, but compliance packs will be on location.

III. Logging program: Induction / GR and density logs at TD.

IV. Materials

A. Casing Program:

Hole Size	Depth	Casing Size	Wt & Grade
12-1/4"	350'	9-5/8"	32.3# H-40
8-3/4"	2000	4-1/2"	10.5# J-55

B. Float Equipment

- a. Surface Casing: Notched collar on bottom and 3 centralizers on the bottom 3 joints.
- b. Production Casing: 4-1/2" whirler type cement nosed guide shoe and a float collar on top of the shoe joint. Centralized with bow spring centralizers

V. Cementing:

• Surface Casing: 9-5/8" 32.3 lb/ft H-40 set to 350'.

Cement 0-350'

Fluid 1: Water Based Spacer

Water Fluid Density: 8.330

lbm/gal

Fluid Volume: 10 bbl

Fluid 2: Lead Cement

Premium Cement Fluid Weight 15.600

lbm/gal

94 lbm/sk Premium Cement (Cement) $1.180 \, \text{ft}^3/\text{sk}$ Slurry Yield: 0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive) Total Mixing Fluid: 5.238

2 % Calcium Chloride (Accelerator) 0 ft Top of Fluid:

Calculated Fill: 350 ft

Volume: 42.139 bbl

> Calculated Sacks: 200.503 sks Proposed Sacks: 205 sks

Fluid 3: Water Based Spacer

Water Displacement Fluid Density: 8.330

lbm/gal

Fluid Volume: 23.966 bbl

• Production Casing: 4-1/2" 10.5 lb/ft J-55 casing set to TD.

Cement

Fluid Instructions

Fluid 1: Water Based Spacer

Water Fluid Density: 8.330

Ibm/gal

Fluid Volume: 20 bbl

Fluid 2: Lead Cement

50/50 Poz Premium Fluid Weight 13 lbm/gal 0.4 % Halad(R)-344 (Low Fluid Loss Control) Slurry Yield: 1.436 ft³/sk

0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive) Total Mixing Fluid: 6.193

Gal/sk

5 lbm/sk Gilsonite (Lost Circulation Additive) Top of Fluid: 0 ft

Calculated Fill: 2000 ft

Volume: 156.266 bbl

Calculated Sacks: 610.982 sks

Proposed Sacks: 615 sks

Fluid 3: Water Based Spacer

Water Displacement Fluid Density: 8.330

lbm/gal

Fluid Volume: 31.197 bbl

• The wells will have 40° of 14" conductor set. Then a 12-1/4" hole will be drilled to about 350' when 9-5/8" surface casing will be set and cemented. We will drill out with a 8-3/4" bit using

MULTI-POINT SURFACE USE PLAN

1. Existing Roads:

When existing roads are used to access the proposed location they will be maintained in the same or better condition than presently found.

2. Planned Access Roads:

Some new access road will have to be constructed. If existing access road is also used, it will be maintained in at least the current condition and will be upgraded where necessary to provide uninterrupted access to the proposed well.

3. Location of Existing Wells:

Attached map (Plat # 1) shows existing wells within one mile radius of the proposed well. N/A

4. Location of Production Facilities:

In the event of production, production facilities will be located on the drill pad. The actual placement of this equipment will be determined when the well's production characteristics can be evaluated after completion.

To protect livestock and wildlife, equipment will be fenced. Any tanks will be enclosed by a dike.

Upon completion of drilling, the location and surrounding area will be cleared of all debris.

5. Water Supply:

Water for drilling and completion will be purchased from local sources.

6. Source of Construction Materials:

No additional construction materials will be required to build.

7. Methods of Handling Waste Disposal:

- a. The drill cuttings, fluids and completion fluids will be placed in the steel tanks. Upon completion, the pad will be leveled, contoured and reseeded with the appropriate seed mixture.
- b. All garbage and trash will be placed in a metal trash basket. It will be hauled off and dumped in an approved land fill upon completion of operations.
- c. Portable toilets will be provided and maintained during drilling operations.

8. Ancillary Facilities:

Ancillary facilities are to be based on well productivity. .

9. Well Site Layout:

A plat of the drill pad with location of drilling equipment and rig orientations also attached.

10. Plans for Restoration of Surface:

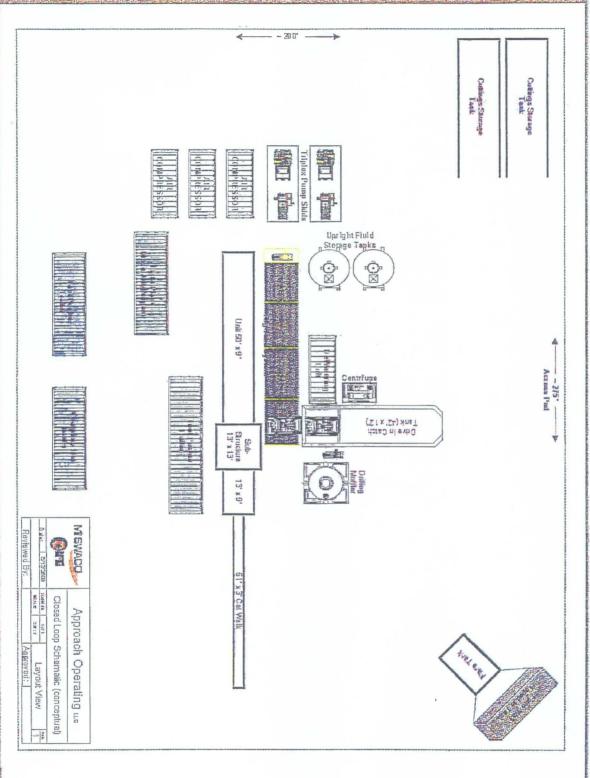
When the well is abandoned the location and access road will be cleaned and restored to the original topographical contours as much as possible. The area will be reseeded with appropriate seed mixture.

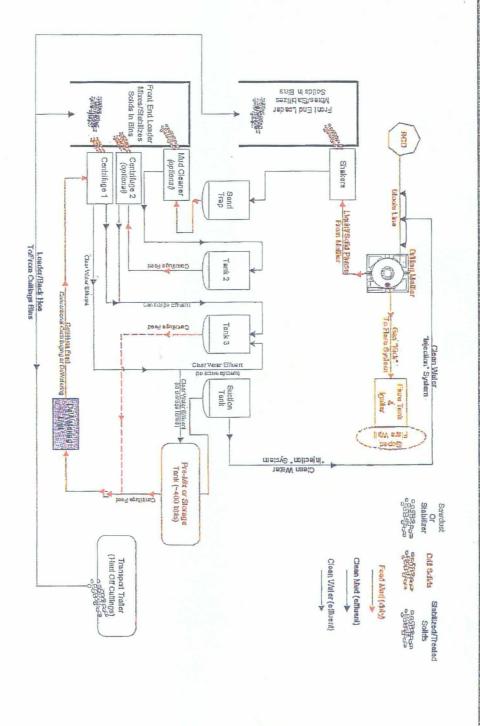
If the well is productive, areas not used in production will be contoured and seeded with stipulated seed mixture. Production equipment will be painted to blend with the natural color of the landscape.

11. Lessee's or Operator's Representative:

Glenn W. Reed, Executive Vice President – Engineering & Operations Approach Resources 6500 West Freeway, Suite 800 Fort Worth, Texas 76116 Phone: (817) 989-9000

Glenn W. Reed
Executive Vice President – Engineering & Operations





	Approved:			Reviewed By:	Revie
	FEBRUAL WOLL	11.9°C	SCALE:		
Nav		1 011	Pachille	60000010	Die
a)	Closed Loop Schematic (conceptual	sed Loop	Clo		
	Approach Operating	Approa		ACC	MISWACO

Form C-144 June 24, 2008

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 Department Oil Conservation Division 1220 South St. Francis Dr.

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.

For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Proposed Alternative Method Permit or Closure Plan Application

Santa Fe. NM 87505

Type of action: Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances. Operator: Approach Operating, LLC OGRID#: 248343

Address: 6500 West Freeway, Suite 800, Ft. Worth, TX 76116

Facility or well name: Woolley Family LA No. 1

API Number: 30-039-30397 OCD Permit Number: U/L or Qtr/Qtr H Section 3 Township 28N Range 52 County: Rio Arriba Center of Proposed Design: Latitude 36° 41'27.88700"N Longitude 106° 25' 11.85397 WAD: 1927 1983 Surface Owner: Federal State Private Tribal Trust or Indian Allotment Pit: Subsection F or G of 19.15.17.11 NMAC Closed-loop System: Subsection H of 19.15.17.11 NMAC ☐ Drying Pad 🏿 Tanks 🗀 Haul-off Bins 🗀 Other Temporary: Drilling Workover ☐ Lined ☐ Unlined Permanent Emergency Cavitation Steel Pit Liner type: Thickness **N/A** mil LLDPE HDPE PVC Lined Unlined Liner type: Thickness _____ mil LLDPE _ HDPE _ PVC ☐ String-Reinforced Seams: Welded Factory Other Volume: N/A bbl N/A yd³ Seams: Welded Factory Other Dimensions: Length W/A x Width W/A Volume: bbl Dimensions: L x W x D Below-grade tank: Subsection I of 19.15.17.11 NMAC Fencing: Subsection D of 19.15.17.11 NMAC Volume: bbl Chain link six feet in height, two strands of barbed wire at top-Four foot height, four strands of barbed wire evenly spaced between one and Type of fluid: Tank Construction material: Netting: Subsection E of 19.15.17.11 NMAC Secondary containment with leak detection Screen Netting Other Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off ☐ Visible sidewalls and liner ☐ Monthly inspections Signs: Subsection C of 19.15.17.11 NMAC ☐ Visible sidewalls only Other _____ 12'x24', 2' lettering, providing Operator's name, site location, and emergency telephone numbers Other _ ☐ Signed in compliance with 19.15.3.103 NMAC Administrative Approvals and Exceptions: Alternative Method: Justifications and/or demonstrations of equivalency are required. Please refer to Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration 19.15.17 NMAC for guidance. of approval. Please check a box if one or more of the following is requested, if not leave Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for consideration of approval.

Environmental Bureau office for consideration of approval.

Siting Criteria (regarding permitting): 19.15.17.10 NMAC		
Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.		
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yês ☐ No	
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	Yes No	
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	Yes No	
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No ☐ NA	
Within 500 horizontal fect of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal fect of any other fresh water well or spring; in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	Yes No	
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	Yes No.	
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No	
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	Yes No	
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	Yes No	
Within a 100-year floodplain FEMA map	Yes No	
Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached: Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC		
Previously Approved Design (attach copy of design) API Number: or Permit Number:		
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the do attached. Geologic and Hydrogeologic Data (required for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of Siting Criteria Compliance Demonstrations (required for on-site closure) - based upon the appropriate requirements of 19.15.17.11 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC	19.15.17.9	
Previously Approved Design (attach copy of design) API Number:		

Permanent Pits Permit Application Checklist: Subsection B of 1945.17.9 NMAC	
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the do	ocuments are
attached. Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Climatological Factors Assessment	
Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC	
Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC	
Quality Control/Quality Assurance Construction and Installation Plan Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC	
Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC	
☐ Nuisance or Hazardous Odors, including H ₂ S, Prevention Plan ☐ Emergency Response Plan	
Oil Field Waste Stream Characterization	
☐ Monitoring and Inspection Plan ☐ Erosion Control Plan	
Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC	
Proposed Closure: 19,15,17,13 NMAC Type: Drilling Workover Emergency Cavitation Permanent Pit Below-grade Tank Closed-loop System [7 Alternative
Proposed Closure Method: Waste Executation and Removal] Atternative
Waste Removal (Closed-loop systems only) On-site Closure Method (Only for temporary pits and closed-loop systems)	
In-place Burial On-site Trench Burial Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for con	nsideration)
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC	
Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding clianges to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.	
Ground water is less than 50 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No
Ground water is between 50 and 100 feet below the bottom of the buried waste NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Ycs No
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Ycs No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	Yes No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	Yes No
Within incorporated municipal boundaries or within a defined municipal fresh water well-field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Vigual inspection (certification) of the proposed site	☐ Yes ☐ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	Yes No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No
Within a 100-year floodplain.	☐ Yes ☐ No

Vaste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached. Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings) Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
Vaste Removal Closure For Closed-loop Systems That Utilize Haul-off Bins Only: (19.15.17.13.D NMAC) Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Disposal Facility Name: Disposal Facility Name: Disposal Facility Permit Number: Disposal Facility Pe
y a check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Construction and Design of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.13 NMAC Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved) Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC
Operator Application Certification:
hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.
Jame (Print): Brice A. Morgan Title: Landaran
Name (Print): Brice A. Morgan Title: Landauan Signature: Date: 7-9-08
-mail address: byorgan@approach lesources. (a) Telephone: 317-989-9000
OCD Approval: Permit Application (including closure plan) Closure Plan (only)
OCD Approval: Permit Application (including closure plan) Closure Plan (only)
OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Representative Signature: Approval Date:
DCD Approval: Permit Application (including closure plan) Closure Plan (only) DCD Representative Signature: Approval Date: Citle: OCD Permit Number: Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Method: Waste Excavation and Removal On-Site Closure Method Alternative Closure Method If different from approved plan, please explain.
DCD Approval: Permit Application (including closure plan) Closure Plan (only) DCD Representative Signature:
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DCD Approval: Permit Application (including closure plan) Closure Plan (only) DCD Representative Signature:
DCD Approval:
DCD Approval: Permit Application (including closure plan) Closure Plan (only)
DCD Approval: Permit Application (including closure plan) Closure Plan (only). DCD Representative Signature: Approval Date:

APPROACH OPERATING, LLC. OPERATIONS PLAN

I. Location:

LAT

Date: June 18, 2008

LONG

Rio Arriba County, NM

Field: Wildcat

Elev: GL

Surface:

II. Drilling

A. Contractor: TBDB. Mud Program:

The surface hole will be drilled with a air, if possible, or fresh water mud.

The production hole will be drilled with air or air/mist.

C. Minimum Blowout Control Specifications:

Double ram type 3000 psi working pressure BOP with a rotating head. See the attached Exhibit # __ for details on the BOP equipment. All ram type preventers and related equipment will be hydraulically tested at nipple-up and after any use under pressure to 1500 psi.

The blind ram will be hydraulically activated and checked for operational readiness each time pipe is pulled out of the hole. All check of the BOP stack and equipment will be noted on the daily drilling report. The BOP equipment will include a kelly cock, floor safety valve, and choke manifold all rated to 2000 psi.

No over pressured zones are expected in this well. No H2S zones expected, but compliance packs will be on location.

III. Logging program: Induction / GR and density logs at TD.

IV. Materials

A. Casing Program:

Hole Size	Depth	Casing Size	Wt & Grade
12-1/4"	350'	9-5/8"	32.3# H-40
8-3/4**	2000	4-1/2"	10.5# J-55

B. Float Equipment

- a. Surface Casing: Notched collar on bottom and 3 centralizers on the bottom 3 joints.
- b. Production Casing: 4-1/2" whirler type cement nosed guide shoe and a float collar on top of the shoe joint. Centralized with bow spring centralizers

V. Cementing:

• Surface Casing: 9-5/8" 32.3 lb/ft H-40 set to 350'.

Cement 0-350'

Fluid 1: Water Based Spacer

Water Fluid Density: 8.330

lbm/gal

Fluid Volume: 10 bbl

Fluid 2: Lead Cement

Premium Cement Fluid Weight 15.600

lbm/gal
94 lbm/sk Premium Cement (Cement)
Slurry Yield: 1.180 ft³/sk

0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive) Total Mixing Fluid: 5.238

2 % Calcium Chloride (Accelerator) Top of Fluid: 0 ft

Calculated Fill: 350 ft
Volume: 42.139 bbl

Calculated Sacks: 200.503 sks
Proposed Sacks: 205 sks

Fluid 3: Water Based Spacer

Water Displacement Fluid Density: 8.330

Ibm/gal

Fluid Volume: 23.966 bbl

• Production Casing: 4-1/2" 10.5 lb/ft J-55 casing set to TD.

Cement

Fluid Instructions

Fluid 1: Water Based Spacer

Water Fluid Density: 8.330

lbm/gal

Fluid Volume: 20 bbl

Fluid 2: Lead Cement

50/50 Poz Premium
0.4 % Halad(R)-344 (Low Fluid Loss Control)
Fluid Weight 13 lbm/gal
Shurry Yield: 1.436 ft³/sk

0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive) Total Mixing Fluid: 6.193

Gal/sk

5 lbm/sk Gilsonite (Lost Circulation Additive)

Top of Fluid: 0 ft

Calculated Fill: 2000 ft

Volume: 156.266 bbl Calculated Sacks: 610.982 sks

Proposed Sacks: 615 sks

Fluid 3: Water Based Spacer

Water Displacement Fluid Density: 8.330

lbm/gal

Fluid Volume: 31.197 bbl

• The wells will have 40' of 14" conductor set. Then a 12-1/4" hole will be drilled to about 350' when 9-5/8" surface casing will be set and cemented. We will drill out with a 8-3/4" bit using

MULTI-POINT SURFACE USE PLAN

1. Existing Roads:

When existing roads are used to access the proposed location they will be maintained in the same or better condition than presently found.

2. Planned Access Roads:

Some new access road will have to be constructed. If existing access road is also used, it will be maintained in at least the current condition and will be upgraded where necessary to provide uninterrupted access to the proposed well.

3. Location of Existing Wells:

Attached map (Plat # 1) shows existing wells within one mile radius of the proposed well. N/A

4. Location of Production Facilities:

In the event of production, production facilities will be located on the drill pad. The actual placement of this equipment will be determined when the well's production characteristics can be evaluated after completion.

To protect livestock and wildlife, equipment will be fenced. Any tanks will be enclosed by a dike.

Upon completion of drilling, the location and surrounding area will be cleared of all debris.

5. Water Supply:

Water for drilling and completion will be purchased from local sources.

6. Source of Construction Materials:

No additional construction materials will be required to build.

7. Methods of Handling Waste Disposal:

- a. The drill cuttings, fluids and completion fluids will be placed in the steel tanks. Upon completion, the pad will be leveled, contoured and reseeded with the appropriate seed mixture.
- b. All garbage and trash will be placed in a metal trash basket. It will be hauled off and dumped in an approved land fill upon completion of operations.
- c. Portable toilets will be provided and maintained during drilling operations.

8. Ancillary Facilities:

Ancillary facilities are to be based on well productivity. .

9. Well Site Layout:

A plat of the drill pad with location of drilling equipment and rig orientations also attached.

10. Plans for Restoration of Surface:

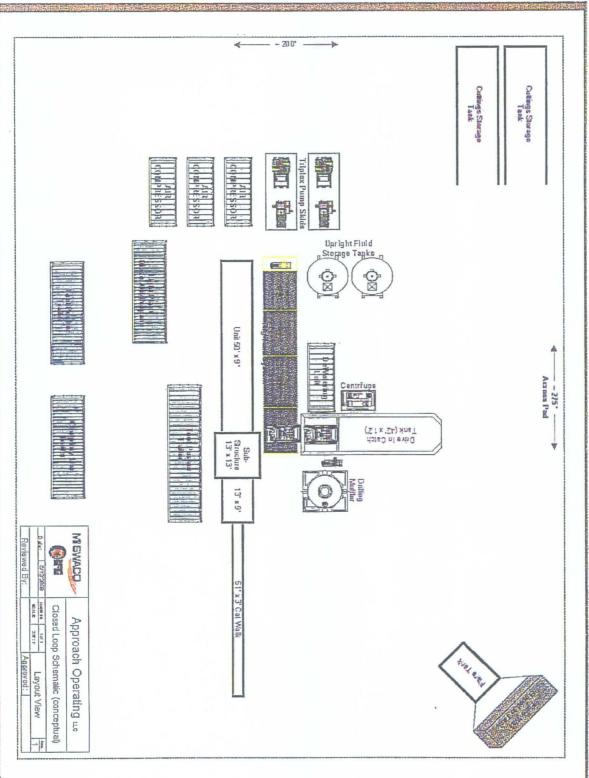
When the well is abandoned the location and access road will be cleaned and restored to the original topographical contours as much as possible. The area will be reseeded with appropriate seed mixture.

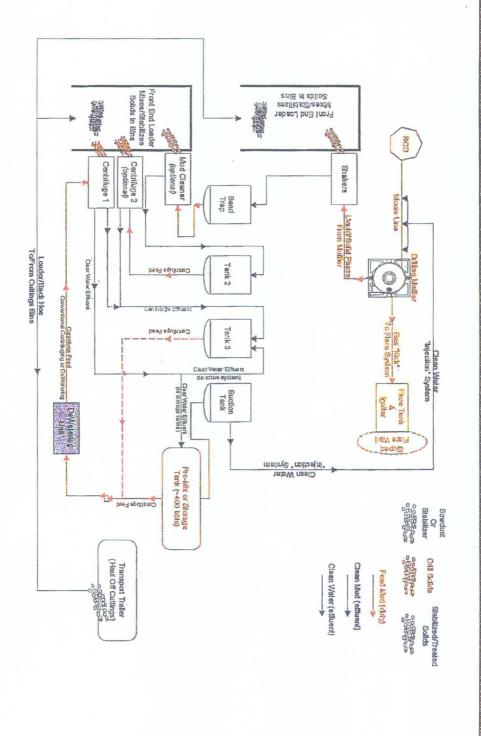
If the well is productive, areas not used in production will be contoured and seeded with stipulated seed mixture. Production equipment will be painted to blend with the natural color of the landscape.

11. Lessee's or Operator's Representative:

Glenn W. Reed, Executive Vice President – Engineering & Operations Approach Resources 6500 West Freeway, Suite 800 Fort Worth, Texas 76116 Phone: (817) 989-9000

Glenn W. Reed
Executive Vice President – Engineering & Operations





MISWACO

Closed Loop Schematic (conceptual)

Approach Operating LLC

Reviewed by:

SCALE

101

Flow Process

Approved:

Form C-144 June 24, 2008

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenuc, 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
Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.

For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Pit, Closed-Loop System, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application

Type of action: Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method

Closure of a pit, closed-loop	system, below-grade tank, or proposed alternative method		
	idividual pit, closed-loop system, below-grade tank or alternative request		
Please be advised that approval of this request does not relieve the operator of licenvironment. Nor does approval relieve the operator of its responsibility to com	ability should operations result in pollution of surface water, ground water or the ply with any other applicable governmental authority's rules, regulations or ordinances.		
Operator: Approach Operating, LLC	OGRID#: 248343 00, Ft. Worth, TX 76116		
Address: 6500 West Freeway Suite 80	00, Ft. Worth, TX 76116		
Facility or well name: Avella Sultemeter A	Vo. Z		
API Number: 30-039 -	OCD Permit Number:		
U/L or Qtr/Qtr 9 Section ZO Township Z	3N Range 42 County: Rio Arriba		
Center of Proposed Design: Latitude 36° 38' 41.8" NAD: 1983			
Surface Owner: Federal State Private Tribal Trust or Indian Allotment			
Pit: Subsection F or G of 19.15.17.11 NMAC	Closed-loop System: Subsection H of 19.15.17.11 NMAC		
Temporary: Drilling Workover	Drying Pad Tanks Haul-off Bins Other		
Permanent Emergency Cavitation Steel Pit Lined Unlined			
Lined Unlined	Liner type: Thickness MA mil LLDPE HDPE PVC		
Liner type: Thicknessmil	Other		
Other String-Reinforced	Seams: Welded Factory Other		
Seams: Welded Factory Other	Volume: <u>N/A</u> bbl <u>N/A</u> yd ³		
Volume:bbl Dimensions: Lx Wx D	Volume:		
Below-grade tank: Subsection I of 19.15.17.11 NMAC	Fencing: Subsection D of 19.15.17.11 NMAC		
Volume:bbl	Chain link, six feet in height, two strands of barbed wire at top		
Type of fluid:	Four foot height, four strands of barbed wire evenly spaced between one and		
Tank Construction material:	four feet		
Secondary containment with leak detection	Netting: Subsection E of 19.15.17.11 NMAC		
☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off	Screen Netting Other		
☐ Visible sidewalls and liner	Monthly inspections		
☐ Visible sidewalls only	Signs: Subsection C of 19.15.17.11 NMAC		
Other	12'x24', 2' lettering, providing Operator's name, site location, and		
Liner type: Thicknessmil	emergency telephone numbers		
Other	Signed in compliance with 19.15.3.103 NMAC		
Alternative Method:	Administrative Approvals and Exceptions:		
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration	Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.		
of approval.	Please check a box if one or more of the following is requested, if not leave		
	blank: Administrative approval(s): Requests must be submitted to the		
	appropriate division district or the Santa Fe Environmental Bureau office for		
	consideration of approval. Exception(s): Requests must be submitted to the Santa Fe		
	Environmental Bureau office for consideration of approval		

	,		
Siting Criteria (regarding permitting): 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.			
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No		
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No		
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	Yes No		
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	Yes No		
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No		
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No		
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	Yes No		
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No		
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No		
Within a 100-year floodplain FEMA map	☐ Yes ☐ No		
Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached: Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.19 NMAC and 19.15.17.13 NMAC			
Préviously Approved Design (attach copy of design) API Number: or Permit Number:			
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are nattached. Geologic and Hydrogeologic Data (required for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 Siting Criteria Compliance Demonstrations (required for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC			
Previously Approved Design (attach copy of design) API Number:			

Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC	aumante ava
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the do attached.	caments are
☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC ☐ Climatological Factors Assessment	
☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC ☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC	
☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC ☐ Quality Control/Quality Assurance Construction and Installation Plan	
Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC	
☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC ☐ Nuisance or Hazardous Odors, including H ₂ S, Prevention Plan	
Emergency Response Plan	
Oil Field Waste Stream Characterization	
☐ Monitoring and Inspection Plan ☐ Erosion Control Plan	
Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC	
Proposed Closure: 19.15.17.13 NMAC	
Type: Drilling Workover Emergency Cavitation Permanent Pit Below-grade Tank Closed-loop System] Alternative
Proposed Closure Method: Waste Excavation and Removal	
Waste Removal (Closed-loop systems only)	
 On-site Closure Method (Only for temporary pits and closed-loop systems) In-place Burial On-site Trench Burial 	
Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for con	sideration)
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC	
Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from	
the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau	
office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10	
NMAC for guidance.	
Ground water is less than 50 feet below the bottom of the buried waste.	Yes No
- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	∐ ŅA
Ground water is between 50 and 100 feet below the bottom of the buried waste	Yes No
- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	□ NA
Ground water is more than 100 feet below the bottom of the buried waste.	Yes No
- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	□ Na
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa	☐ Yes ☐ No
lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	Yes No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	Yes No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance	Yes No
adopted pursuant to NMSA 1978, Section 3-27-3, as amended.	
- Written confirmation or verification from the municipality; Written approval obtained from the municipality	
Within 500 feet of a wetland.	☐ Yes ☐ No
- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	- - ·
Within the area overlying a subsurface mine.	☐ Yes ☐ No
- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	-
Within an unstable area.	
- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological	☐ Yes ☐ No
Society; Topographic map	
Within a 100-year floodplain.	☐ Yes ☐ No

Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached. Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings) Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC
Waste Removal Closure For Closed-loop Systems That Utilize Haul-off Bins Only: (19.15.17.13.D NMAC) Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Disposal Facility Name: TNT Environmental Inc. Disposal Facility Permit Number: NM-01-0008
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the bax, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Construction and Design of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.13 NMAC Protocols and Procedures - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings on in case on-site closure standards cannot be achieved) Soil Cover Design - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC
Operator Application Certification:
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.
Name (Print): Brice A. Morgan Title: Landman
Name (Print): Brice A. Morgan Title: Landman Signature: 7-9-08
-mail address: bMotaca Capptoach Telephone: 517-989-9000 DCD Approval: Permit Application (including closure plan) Closure Plan (only)
OCD Approval: Permit Application (including closure plan) Closure Plan (only)
OCD Representative Signature: Approval Date:
OCD Representative Signature: Approval Date: Citle: OCD Permit Number: Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Completion Date:
OCD Representative Signature: Approval Date: Citle: OCD Permit Number: Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC
OCD Permit Number: Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Method: Closure Method: Alternative Closure Method Alternative Closure Method If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclaimation (Photo Documentation)
Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Completion Date: Closure Method: Closure Completion Date: Closure Method: Closure Method Alternative Closure Method If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Location: Latitude Longitude NAD: 1927 1983
OCD Permit Number: Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Method: Closure Method: Alternative Closure Method Alternative Closure Method If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclaimation (Photo Documentation)
Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Completion Date: Closure Method: Closure Completion Date: Closure Method: Alternative Closure Method Alternative Closure Method If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Contined Latitude Longitude NAD: 1927 1983 Decrator Closure Certification: hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and
Closure Report (required within 60 days of closure completion); Subsection K of 19.15.17.13 NMAC Closure Completion Date: Closure Method: Closure Method: Closure Completion Date: Closure Method: Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice: Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Location: Latitude Longitude NAD: 1927 1983 Disposal Facility that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and elefef. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

APPROACH OPERATING, LLC. OPERATIONS PLAN

I. Location:

LAT

Date: June 18, 2008

LONG

Rio Arriba County, NM

Field: Wildcat

Elev: GL

Surface:

II. Drilling

A. Contractor: TBD B. Mud Program:

The surface hole will be drilled with a air, if possible, or fresh water mud.

The production hole will be drilled with air or air/mist.

C. Minimum Blowout Control Specifications:

Double ram type 3000 psi working pressure BOP with a rotating head. See the attached Exhibit # __ for details on the BOP equipment. All ram type preventers and related equipment will be hydraulically tested at nipple-up and after any use under pressure to 1500 psi.

The blind ram will be hydraulically activated and checked for operational readiness each time pipe is pulled out of the hole. All check of the BOP stack and equipment will be noted on the daily drilling report. The BOP equipment will include a kelly cock, floor safety valve, and choke manifold all rated to 2000 psi.

No over pressured zones are expected in this well. No H2S zones expected, but compliance packs will be on location.

III. Logging program: Induction / GR and density logs at TD.

IV. Materials

A. Casing Program:

Hole Size	Depth	Casing Size	Wt & Grade
12-1/4"	350°	9-5/8"	32.3# H-40
8-3/4**	2000	4-1/2"	10.5# J-55

B. Float Equipment

- a. Surface Casing: Notched collar on bottom and 3 centralizers on the bottom 3 joints.
- b. Production Casing: 4-1/2" whirler type cement nosed guide shoe and a float collar on top of the shoe joint. Centralized with bow spring centralizers

V. Cementing:

• Surface Casing: 9-5/8" 32.3 lb/ft H-40 set to 350'.

Cement 0-350'

Fluid 1: Water Based Spacer

Water Fluid Density: 8.330

lbm/gal

Fluid Volume: 10 bbl

Fluid 2: Lead Cement

Premium Cement Fluid Weight 15.600

lbm/gal

94 lbm/sk Premium Cement (Cement) Slurry Yield: 1.180 ft³/sk

0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive) Total Mixing Fluid: 5.238

Gal/sk

2 % Calcium Chloride (Accelerator) Top of Fluid: 0 ft

Calculated Fill: 350 ft

Volume: 42.139 bbl

Calculated Sacks: 200.503 sks

Proposed Sacks: 205 sks

Fluid 3: Water Based Spacer

Water Displacement Fluid Density: 8.330

lbm/gal

Fluid Volume: 23.966 bbl

• Production Casing: 4-1/2" 10.5 lb/ft J-55 casing set to TD.

Cement

Fluid Instructions

Fluid 1: Water Based Spacer

Water Fluid Density: 8.330

lbm/gal

Fluid Volume: 20 bbl

Fluid 2: Lead Cement

50/50 Poz Premium Fluid Weight 13 lbm/gal 0.4 % Halad(R)-344 (Low Fluid Loss Control) Slurry Yield: 1.436 ft³/sk

0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive) Total Mixing Fluid: 6.193

Gal/sk

5 lbm/sk Gilsonite (Lost Circulation Additive) Top of Fluid: 0 ft

Calculated Fill: 2000 ft

Volume: 156.266 bbl

Calculated Sacks: 610.982 sks

Proposed Sacks: 615 sks.

Fluid 3: Water Based Spacer

Water Displacement Fluid Density: 8.330

lbm/gal

Fluid Volume: 31.197 bbl

• The wells will have 40' of 14" conductor set. Then a 12-1/4" hole will be drilled to about 350' when 9-5/8" surface casing will be set and cemented. We will drill out with a 8-3/4" bit using

MULTI-POINT SURFACE USE PLAN

1. Existing Roads:

When existing roads are used to access the proposed location they will be maintained in the same or better condition than presently found.

2. Planned Access Roads:

Some new access road will have to be constructed. If existing access road is also used, it will be maintained in at least the current condition and will be upgraded where necessary to provide uninterrupted access to the proposed well.

3. Location of Existing Wells:

Attached map (Plat # 1) shows existing wells within one mile radius of the proposed well. N/A

4. Location of Production Facilities:

In the event of production, production facilities will be located on the drill pad. The actual placement of this equipment will be determined when the well's production characteristics can be evaluated after completion.

To protect livestock and wildlife, equipment will be fenced. Any tanks will be enclosed by a dike.

Upon completion of drilling, the location and surrounding area will be cleared of all debris.

5. Water Supply:

Water for drilling and completion will be purchased from local sources.

6. Source of Construction Materials:

No additional construction materials will be required to build.

7. Methods of Handling Waste Disposal:

- a. The drill cuttings, fluids and completion fluids will be placed in the steel tanks. Upon completion, the pad will be leveled, contoured and reseeded with the appropriate seed mixture.
- b. All garbage and trash will be placed in a metal trash basket. It will be hauled off and dumped in an approved land fill upon completion of operations.
- c. Portable toilets will be provided and maintained during drilling operations.

8. Ancillary Facilities:

Ancillary facilities are to be based on well productivity. .

9. Well Site Layout:

A plat of the drill pad with location of drilling equipment and rig orientations also attached.

10. Plans for Restoration of Surface:

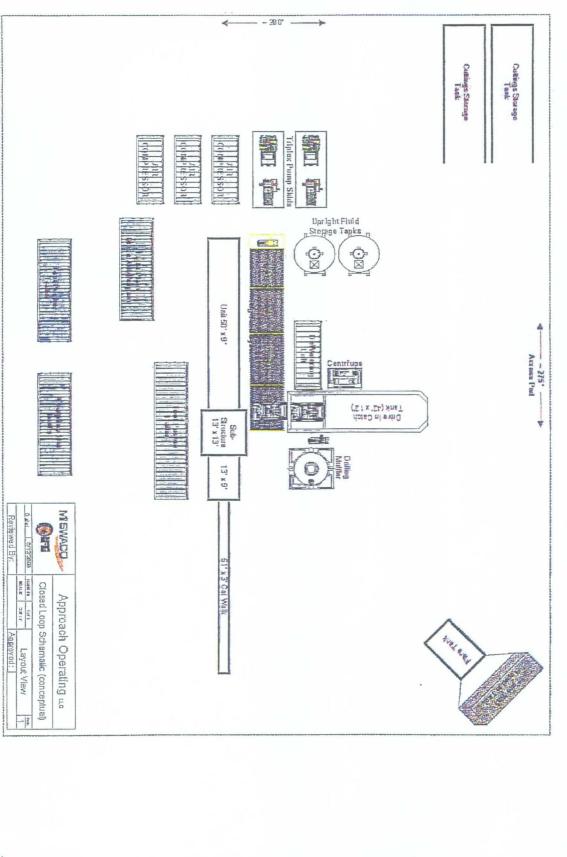
When the well is abandoned the location and access road will be cleaned and restored to the original topographical contours as much as possible. The area will be reseeded with appropriate seed mixture.

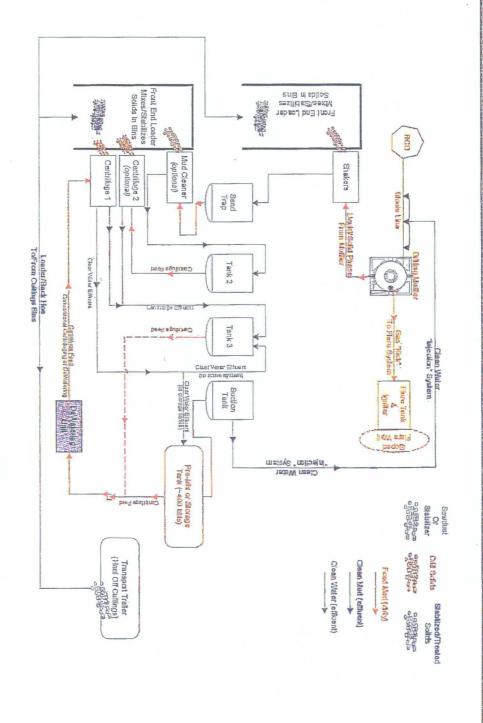
If the well is productive, areas not used in production will be contoured and seeded with stipulated seed mixture. Production equipment will be painted to blend with the natural color of the landscape.

11. Lessee's or Operator's Representative:

Glenn W. Reed, Executive Vice President – Engineering & Operations Approach Resources 6500 West Freeway, Suite 800 Fort Worth, Texas 76116 Phone: (817) 989-9000

Glenn W. Reed
Executive Vice President – Engineering & Operations





		PECH NO	6000,61/10	Date
Closed Loop Schematic (conceptual)	osed Loa	C		
pproach Operating	Appro		ACO	MEM

Form C-144 June 24, 2008

District 1
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 Department Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office. For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Pit, Closed-Loop System, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application

	ystem, below-grade tank, or proposed alternative method system, below-grade tank, or proposed alternative method		
Instructions: Please submit one application (Form C-144) per in	dividual pit, closed-loop system, below-grade tank or alternative request		
Please be advised that approval of this request does not relieve the operator of lia	bility should operations result in pollution of surface water, ground water or the ply with any other applicable governmental authority's rules, regulations or ordinances.		
Operator: Asstoach Operating, CCC	OGRID#: 248343		
Address: 10000 U. P. T. I. Lewis College	300, 17, 0001 12, 17, 1011 0		
Facility or well name: Rosemany Poller No. 1			
API Number: 30-039 -	OCD Permit Number:		
API Number: 30-039 - OCD Permit Number: U/L or Qtr/Qtr N Section 9 Township 28N Range 52 County: Rio Arriba			
Center of Proposed Design: Latitude 36° 40' 18.4" N Longitude 106° 24' 41.5" W NAD: \$\infty\$1927 \Bigs 1983			
Surface Owner: Federal State Private Tribal Trust or Indian Allotment			
Pit: Subsection F or G of 19.15.17.11 NMAC	Closed-loop System: Subsection H of 19.15.17.11 NMAC		
Temporary: Drilling Workover	Drying Pad X Tanks Haul-off Bins Other		
Permanent Emergency Cavitation Steel Pit	Lined Unlined		
Lined Unlined	Liner type: Thickness N/A mil LLDPE HDPE PVC		
Liner type: Thicknessmil	Other		
Other String-Reinforced	Seams: Welded Factory Other		
Seams: Welded Factory Other	Volume: N/A bbl N/A yd ³		
Volume:bbl Dimensions: Lx Wx D	Seams: Welded Factory Other Volume: W/A bbl W/A yd³ Dimensions: Length W/A x Width W/A		
Below-grade tank: Subsection I of 19.15.17.11 NMAC	Fencing: Subsection D of 19.15.17.11 NMAC		
Volume:bbl	Chain link, six feet in height, two strands of barbed wire at top		
Type of fluid:	Four foot height, four strands of barbed wire evenly spaced between one and		
Tank Construction material:	four fect		
Secondary containment with leak detection	Netting: Subsection E of 19.15.17.11 NMAC		
☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off	Screen Netting Other		
☐ Visible sidewalls and liner	Monthly inspections		
☐ Visible sidewalls only	Signs: Subsection C of 19.15.17.11 NMAC		
Other	12'x24', 2' lettering, providing Operator's name, site location, and		
Liner type: Thicknessmil	emergency telephone numbers		
☐ Other	Signed in compliance with 19.15.3.103 NMAC		
Alternative Method:	Administrative Approvals and Exceptions:		
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration	Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.		
of approval.	Please check a box if one or more of the following is requested, if not leave		
	blank:		
	Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for		
	consideration of approval.		
	Exception(s): Requests must be submitted to the Santa Fe		

Siting Criteria (regarding permitting): 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa-Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.		
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No	
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No	
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No ☐ NA	
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No ☐ NA	
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No	
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ Ño	
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No	
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	Yes No	
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No	
Within a 100-year floodplain FEMA map	Yes No	
Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached. Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.13 NMAC Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC		
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application: Please indicate, by a check mark in the box, that the documents are attached. Geologic and Hydrogeologic Data (required for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 Siting Criteria Compliance Demonstrations (required for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC NMAC Previously Approved Design (attach copy of design) API Number:		
El Treviously Approved Design (attach copy of design) - Art Indibot.	}	

Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC	
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the de	ocuments are
attached. Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Climatological Factors Assessment	
Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC	
Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC	
Quality Control/Quality Assurance Construction and Installation Plan Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC	
Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC	
Nuisance or Hazardous Odors, including H ₂ S, Prevention Plan Emergency Response Plan	
Oil Field Waste Stream Characterization Monitoring and Inspection Plan	
Erosion Control Plan Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC	
Proposed Closure: 19.15,17.13 NMAC	
Type: Drilling Workover Emergency Cavitation Permanent Pit Below-grade Tank Closed-loop System	Alternative
Proposed Closure Method: Waste Excavation and Removal Waste Removal (Closed-loop systems only) On-site Closure Method (Only for temporary pits and closed-loop systems)	
☐ In-place Burial ☐ On-site Trench Burial ☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for contact of the Santa Fe Environmental Bur	nsideration)
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC	
Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.	
Ground water is less than 50 feet below the bottom of the buried waste, - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No
Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Ŷes ☐ No ☐ NA
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse of lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	Yes No.
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Acrial photo; Safellite image	☐ Yes ☐ No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	Yes No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	Yes No
Within a 100-year floodplain: - FEMA map	☐ Yes ☐ No

Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) closure plan. Please indicate, by a check mark in the box, that the documents at Protocols and Procedures - based upon the appropriate requirements of 19.1 Confirmation Sampling Plan (if applicable) - based upon the appropriate red Disposal Facility Name and Permit Number (for liquids, drilling fluids and Soil Backfill and Cover Design Specifications - based upon the appropriate Re-vegetation Plan - based upon the appropriate requirements of Subsection Site Reclamation Plan - based upon the appropriate requirements of Subsection	re attached. 5.17.13 NMAC quirements of Subsection F of 19.15.17.13 NMAC drill cuttings) requirements of Subsection H of 19.15.17.13 NMAC of 19.15.17.13 NMAC from G of 19.15.17.13 NMAC
Waste Removal Closure For Closed-loop Systems That Utilize Haul-off Bins of facilities for the disposal of liquids, drilling fluids and drill cuttings. Disposal Facility Name: TUT Environmental Inc.	
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the by a check-mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of Proof of Surface Owner Notice - based upon the appropriate requirements of Construction and Design of Burial Trench (if applicable) based upon the appropriate requirements of 19.1 Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Disposal Facility Name and Permit Number (for liquids, drilling fluids and Soil Cover Design - based upon the appropriate requirements of Subsection Re-vegetation Plan - based upon the appropriate requirements of Subsection Site Reclamation Plan - based upon the appropriate requirements of Subsection	ne following items must be attached to the closure plan. Please indicate, furiements of 19.15.17.10 NMAC of Subsection F of 19.15.17.13 NMAC opropriate requirements of 19.15.17.11 NMAC opropriate requirements of 19.15.17.13 NMAC
Operator Application Certification:	
I hereby certify that the information submitted with this application is true, accura Name (Print): Brice A. Morgan	te and complete to the best of my knowledge and belief. Title:
Name (Print): Brice A. Morgan Signature: BAM	Date: 1-9-08
e-mail address: bMorgan@approach resources.com	Telephone: 817-989-9000
OCD Approval: Permit Application (including closure plan) Closure Plan	an (only)
	ii (on))
OCD Representative Signature:	
OCD Representative Signature: Title:	
	Approval Date: ÓCD Permit Number:
Closure Report (required within 60 days of closure completion): Subsection I Closure Method: Waste Excavation and Removal On-Site Closure Method Alternat If different from approved plan, please explain.	Approval Date: OCD Permit Number: C of 19:15.17.13 NMAC Closure Completion Date:
Closure Report (required within 60 days of closure completion): Subsection I Closure Method: Waste Excavation and Removal On-Site Closure Method Alternated If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following ite mark in the box, that the documents are attached. Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation)	Approval Date: OCD Permit Number: C of 19.15.17.13 NMAC Closure Completion Date: tive Closure Method ms must be attached to the closure report. Please indicate, by a check
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Closure Report (required within 60 days of closure completion): Subsection I Closure Method: Waste Excavation and Removal On-Site Closure Method Alternat If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following ite mark in the box, that the documents are attached. Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Location: Latitude Longitu Operator Closure Certification: I hereby certify that the information and attachments submitted with this closure redefief. I also certify that the closure complies with all applicable closure requirements	Approval Date: OCD Permit Number: C of 19:15.17.13 NMAC Closure Completion Date: tive Closure Method ms must be attached to the closure report. Please indicate, by a check deNAD:1927

APPROACH OPERATING, LLC. OPERATIONS PLAN

I. Location:

LAT

Date: June 18, 2008

LONG

Rio Arriba County, NM

Field: Wildcat

Elev: GL

Surface:

II. Drilling

A. Contractor: TBD B. Mud Program:

The surface hole will be drilled with a air, if possible, or fresh water mud.

The production hole will be drilled with air or air/mist.

C. Minimum Blowout Control Specifications:

Double ram type 3000 psi working pressure BOP with a rotating head. See the attached Exhibit # __ for details on the BOP equipment. All ram type preventers and related equipment will be hydraulically tested at nipple-up and after any use under pressure to 1500 psi.

The blind ram will be hydraulically activated and checked for operational readiness each time pipe is pulled out of the hole. All check of the BOP stack and equipment will be noted on the daily drilling report. The BOP equipment will include a kelly cock, floor safety valve, and choke manifold all rated to 2000 psi.

No over pressured zones are expected in this well. No H2S zones expected, but compliance packs will be on location.

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IV. Materials

A. Casing Program:

Hole Size	Depth	Casing Size	Wt & Grade
12-1/4"	350'	9-5/8"	32.3# H-40
8-3/4**	20003	4-1/2"	10.5# J-55

B. Float Equipment

- a. Surface Casing: Notched collar on bottom and 3 centralizers on the bottom 3 joints.
- b. Production Casing: 4-1/2" whirler type cement nosed guide shoe and a float collar on top of the shoe joint. Centralized with bow spring centralizers

V. Cementing:

• Surface Casing: 9-5/8" 32.3 lb/ft H-40 set to 350'.

Cement 0-350'

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Water Fluid Density: 8.330

lbm/gal
Fluid Volume: 10 bbl

Fluid 2: Lead Cement

Premium Cement Fluid Weight 15.600

lbm/gal94 lbm/sk Premium Cement (Cement)Slurry Yield:

94 lbm/sk Premium Cement (Cement) Slurry Yield: 1.180 ft³/sk 0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive) Total Mixing Fluid: 5.238

0.125 IDM/SK Poly-E-Flake (Lost Circulation Additive) Total Mixing Fluid:

2 % Calcium Chloride (Accelerator) Top of Fluid: 0 ft

Calculated Fill: 350 ft

Volume: 42.139 bbl Calculated Sacks: 200.503 sks

Proposed Sacks: 205 sks

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Ibm/gal

Fluid Volume: 23,966 bbl

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0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive) Total Mixing Fluid: 6.193

Gal/sk

5 lbm/sk Gilsonite (Lost Circulation Additive) Top of Fluid: 0 ft

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MULTI-POINT SURFACE USE PLAN

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When existing roads are used to access the proposed location they will be maintained in the same or better condition than presently found.

2. Planned Access Roads:

Some new access road will have to be constructed. If existing access road is also used, it will be maintained in at least the current condition and will be upgraded where necessary to provide uninterrupted access to the proposed well.

3. Location of Existing Wells:

Attached map (Plat # 1) shows existing wells within one mile radius of the proposed well. N/A

4. Location of Production Facilities:

In the event of production, production facilities will be located on the drill pad. The actual placement of this equipment will be determined when the well's production characteristics can be evaluated after completion.

To protect livestock and wildlife, equipment will be fenced. Any tanks will be enclosed by a dike.

Upon completion of drilling, the location and surrounding area will be cleared of all debris.

5. Water Supply:

Water for drilling and completion will be purchased from local sources.

6. Source of Construction Materials:

No additional construction materials will be required to build.

7. Methods of Handling Waste Disposal:

- a. The drill cuttings, fluids and completion fluids will be placed in the steel tanks. Upon completion, the pad will be leveled, contoured and reseeded with the appropriate seed mixture.
- b. All garbage and trash will be placed in a metal trash basket. It will be hauled off and dumped in an approved land fill upon completion of operations.
- c. Portable toilets will be provided and maintained during drilling operations.

8. Ancillary Facilities:

Ancillary facilities are to be based on well productivity. .

9. Well Site Layout:

A plat of the drill pad with location of drilling equipment and rig orientations also attached.

10. Plans for Restoration of Surface:

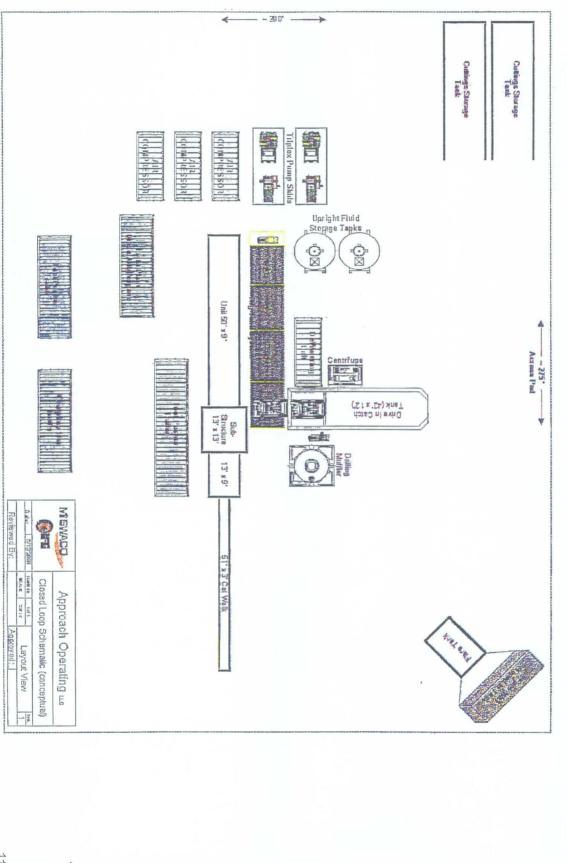
When the well is abandoned the location and access road will be cleaned and restored to the original topographical contours as much as possible. The area will be reseeded with appropriate seed mixture.

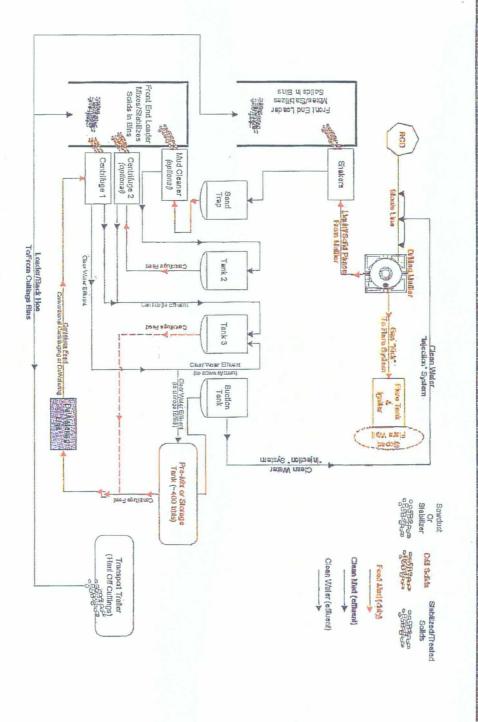
If the well is productive, areas not used in production will be contoured and seeded with stipulated seed mixture. Production equipment will be painted to blend with the natural color of the landscape.

11. Lessee's or Operator's Representative:

Glenn W. Reed, Executive Vice President – Engineering & Operations Approach Resources 6500 West Freeway, Suite 800 Fort Worth, Texas 76116 Phone: (817) 989-9000

Glenn W. Reed
Executive Vice President – Engineering & Operations





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

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.

For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Pit, Closed-Loop System, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application

Type of action: Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method

Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method

Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

Operator: Associate Operating, LLC	OGRID#: 248343
Operator: Approach Operating, LLC Address: 6500 West Free way, Sui	te 800 Fort Worth, TX 76116
Facility or well name: Leo Valdez No. 1	•
	OCD Permit Number: BN Range 42 County: Rio Arriba
Center of Proposed Design: Latitude 36° 39'47.90" N	Longitude <u>/06° 33′29./8" W</u> NAD: ⊠ 1927 ☐ 1983
Surface Owner: Federal State Private Tribal Trust or Indian	Allotment
Pit: Subsection F or G of 19.15.17.11 NMAC	Closed-loop System: Subsection H of 19.15.17.11 NMAC
Temporary: Drilling Workover	Drying Pad Tanks Haul-off Bins Other
Permanent Emergency Cavitation Steel Pit	Lined Unlined
Lined Unlined	Liner type: Thickness NA mil LLDPE HDPE PVC
Liner type: Thicknessmil	Other
Other String-Reinforced	Scams: Welded Factory Other
Scams: Welded Factory Other	Volume: N/A bbl N/A yd3
Volume:bbl Dimensions: L x W x D	Dimensions: Length N/A x Width N/A'
Below-grade tank: Subsection I of 19.15.17.11 NMAC	Fencing: Subsection D of 19.15.17.11 NMAC
Volume:bbl	Chain link, six feet in height, two strands of barbed wire at top
Type of fluid:	Four foot height, four strands of barbed wire evenly spaced between one and
Tank Construction material:	·four feet
Secondary containment with leak detection	Netting: Subscction E of 19:15.17.11 NMAC
☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off	Screen Netting Other
☐ Visible sidewalls and liner	Monthly inspections
☐ Visible sidewalls only	Signs: Subsection C of 19.15.17.11 NMAC
Other	12'x24', 2' lettering, providing Operator's name, site location, and
Liner type: Thicknessmil	emergency telephone numbers
Other	Signed in compliance with 19.15.3.103 NMAC
Alternative Method: Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration	Administrative Approvals and Exceptions: Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.
of approval.	Please check a box if one or more of the following is requested, if not leave blank: Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for consideration of approval. Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

Siting Criteria (regarding permitting): 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.	
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site.	Yes No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	Yes No
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No ☐ NA
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Ycs ☐ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	Yes No
Within a 100-year floodplain FEMA map	☐ Yes ☐ No
Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the do attached. Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.1 Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC Previously Approved Design (attach copy of design) API Number:	ocuments are
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC	
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the do attached. Geologic and Hydrogeologic Data (required for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of Siting Criteria Compliance Demonstrations (required for on-site closure) - based upon the appropriate requirements of 19.15.17.10 Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC	19.15.17.9
Previously Approved Design (attach copy of design) API Number:	

Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC	
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the deattached.	cuments are
Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC	
Siting Criteria: Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC	
Climatological Factors Assessment	
☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC	
Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC	
Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC	
Quality Control/Quality Assurance Construction and Installation Plan	
Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC	
Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Nuisance or Hazardous Odors, including H ₂ S, Prevention Plan	
☐ Nuisance of Hazardous Odors, including H₂S, Prevention Plan ☐ Emergency Response Plan	
Oil Field Waste Stream Characterization	
Monitoring and Inspection Plan	
☐ Erosion Control Plan ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC	
Proposed Closure: 19.15.17.13 NMAC	-
Type: Drilling Workover Emergency Cavitation Permanent Pit Below-grade Tank Closed-loop System	_ Alternative
Proposed Closure Method: Waste Excavation and Removal	l
Waste Removal (Closed-loop systems only)	
☐ On-site Closure Method (Only for temporary pits and closed-loop systems) ☐ In-place Burial ☐ On-site Trench Burial	
Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for co	nsideration)
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC	
Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable	
source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from	
the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau	
office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10	
NMAC for guidance.	
Ground water is less than 50 feet below the bottom of the buried waste.	☐ Yes ☐ No
- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	□ NA
Ground water is between 50 and 100 feet below the bottom of the buried waste	☐ Yes ☐ No
- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	□ NA
Construction of the 100 Cost below the best of the bound	☐ Yes ☐ No
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No
- 1111 Office of the State Digities - 1111 1110 dilabase scarolly 0505, Data obtained from ficulty world	<u></u>
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa	☐ Yes ☐ No
lake (measured from the ordinary high-water mark).	
- Topographic map; Visual inspection (certification) of the proposed site	
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.	☐ Yes ☐ No
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock	☐ Yes ☐ No
watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.	
- NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance	☐ Yes ☐ No
adopted pursuant to NMSA 1978, Section 3-27-3, as amended.	
- Written confirmation or verification from the municipality; Written approval obtained from the municipality	
Wishin 500 foot of a modernia	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	
Within the area overlying a subsurface mine.	☐ Yes ☐ No
- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	
Within an unstable area.	
- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological	☐ Yes ☐ No
Society; Topographic map	
Within a 100-year floodplain.	☐ Yes ☐ No
FEMA man	

Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached: Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
 □ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC □ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings) □ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC □ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC □ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC
Waste Removal Closure For Closed-loop Systems That Utilize Haul-off Bins Only: (19.15.17.13.D NMAC) Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Disposal Facility Name: TW Environmental Inc. Disposal Facility Permit Number: WM-01-0008
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate,
by a check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Construction and Design of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.13 NMAC Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings on case on-site closure standards cannot be achieved) Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
Operator Application Certification:
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.
Name (Print): Frice A. Morcan Title: Landman
Signature: 3A.M. Date: 7-9-08
e-mail address: bMotgan@approachsesources.com Telephone: 817-989-9000
OCD Approval: Permit Application (including closure plan) Closure Plan (only)
OCD Representative Signature: Approval Date:
Title: OCD Permit Number:
Closure Report (required within 60 days of closure completion): Subsection K of 19:15.17.13 NMAC Closure Completion Date:
Closure Report (required within 60 days of closure completion): Subsection K of 19:15.17.13 NMAC Closure Completion Date: Closure Method: Alternative Closure Method If different from approved plan, please explain.
Closure Report (required within 60 days of closure completion): Subsection K of 19:15.17.13 NMAC Closure Method: Alternative Closure Method If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation)
Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Method: Waste Excavation and Removal On-Site Closure Method If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Location: Latitude Longitude NAD: 1927 1983
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Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Method: Waste Excavation and Removal On-Site Closure Method Alternative Closure Method If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Location: Latitude Longitude NAD: 1927 1983 Operator Closure Certification:

APPROACH OPERATING, LLC. OPERATIONS PLAN

I. Location:

LAT

Date: June 18, 2008

LONG

Rio Arriba County, NM

Field: Wildcat

Elev: GL

Surface:

II. Drilling

A. Contractor: TBD B. Mud Program:

The surface hole will be drilled with a air, if possible, or fresh water mud.

The production hole will be drilled with air or air/mist.

C. Minimum Blowout Control Specifications:

Double ram type 3000 psi working pressure BOP with a rotating head. See the attached Exhibit # __ for details on the BOP equipment. All ram type preventers and related equipment will be hydraulically tested at nipple-up and after any use under pressure to 1500 psi.

The blind ram will be hydraulically activated and checked for operational readiness each time pipe is pulled out of the hole. All check of the BOP stack and equipment will be noted on the daily drilling report. The BOP equipment will include a kelly cock, floor safety valve, and choke manifold all rated to 2000 psi.

No over pressured zones are expected in this well. No H2S zones expected, but compliance packs will be on location.

III. Logging program: Induction / GR and density logs at TD.

IV. Mäterials

A. Casing Program:

Hole Size	Depth	Casing Size	Wt & Grade
12-1/4"	350'	9-5/8"	32.3# H-40
8-3/4**	2000	4-1/2"	10.5# J-55

B. Float Equipment

- a. Surface Casing: Notched collar on bottom and 3 centralizers on the bottom 3 joints.
- b. Production Casing: 4-1/2" whirler type cement nosed guide shoe and a float collar on top of the shoe joint. Centralized with bow spring centralizers

V. Cementing:

• Surface Casing: 9-5/8" 32.3 lb/ft H-40 set to 350'.

Cement 0-350'

Fluid 1: Water Based Spacer

Water Fluid Density: 8.330

Ibm/gal
Fluid Volume: 10 bbl

Fluid 2: Lead Cement

Premium Cement Fluid Weight 15.600

lbm/gal

94 lbm/sk Premium Cement (Cement) Slurry Yield: 1.180 ft³/sk

0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive) Total Mixing Fluid: 5.238

Gal/sk

2 % Calcium Chloride (Accelerator) Top of Fluid: 0 ft

Calculated Fill: 350 ft

Volume: 42.139 bbl

Calculated Sacks: 200.503 sks

Proposed Sacks: 205 sks

Fluid 3: Water Based Spacer

Water Displacement Fluid Density: 8.330

lbm/gal

Fluid Volume: 23.966 bbl

• Production Casing: 4-1/2" 10.5 lb/ft J-55 casing set to TD.

Cement

Fluid Instructions

Fluid 1: Water Based Spacer

Water Fluid Density: 8.330

lbm/gal

Fluid Volume: 20 bbl

Fluid 2: Lead Cement

50/50 Poz Premium Fluid Weight 13 lbm/gal 0.4 % Halad(R)-344 (Low Fluid Loss Control) Slurry Yield: 1.436 ft³/sk

0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive) Total Mixing Fluid: 6.193

Gal/sk

lbm/gal

5 lbm/sk Gilsonite (Lost Circulation Additive) Top of Fluid: 0 ft

Calculated Fill: 2000 ft

Volume: 156.266 bbl Calculated Sacks: 610.982 sks

Proposed Sacks: 615 sks

Fluid 3: Water Based Spacer

Water Displacement Fluid Density: 8.330

Fluid Volume: 31.197 bbl

• The wells will have 40' of 14" conductor set. Then a 12-1/4" hole will be drilled to about 350' when 9-5/8" surface casing will be set and cemented. We will drill out with a 8-3/4" bit using

MULTI-POINT SURFACE USE PLAN

1. Existing Roads:

When existing roads are used to access the proposed location they will be maintained in the same or better condition than presently found.

2. Planned Access Roads:

Some new access road will have to be constructed. If existing access road is also used, it will be maintained in at least the current condition and will be upgraded where necessary to provide uninterrupted access to the proposed well.

3. Location of Existing Wells:

Attached map (Plat # 1) shows existing wells within one mile radius of the proposed well. N/A

4. Location of Production Facilities:

In the event of production, production facilities will be located on the drill pad. The actual placement of this equipment will be determined when the well's production characteristics can be evaluated after completion.

To protect livestock and wildlife, equipment will be fenced. Any tanks will be enclosed by a dike.

Upon completion of drilling, the location and surrounding area will be cleared of all debris.

5. Water Supply:

Water for drilling and completion will be purchased from local sources.

6. Source of Construction Materials:

No additional construction materials will be required to build.

7. Methods of Handling Waste Disposal:

- a. The drill cuttings, fluids and completion fluids will be placed in the steel tanks. Upon completion, the pad will be leveled, contoured and reseeded with the appropriate seed mixture.
- b. All garbage and trash will be placed in a metal trash basket. It will be hauled off and dumped in an approved land fill upon completion of operations.
- c. Portable toilets will be provided and maintained during drilling operations.

8. Ancillary Facilities:

Ancillary facilities are to be based on well productivity.

9. Well Site Layout:

A plat of the drill pad with location of drilling equipment and rig orientations also attached.

10. Plans for Restoration of Surface:

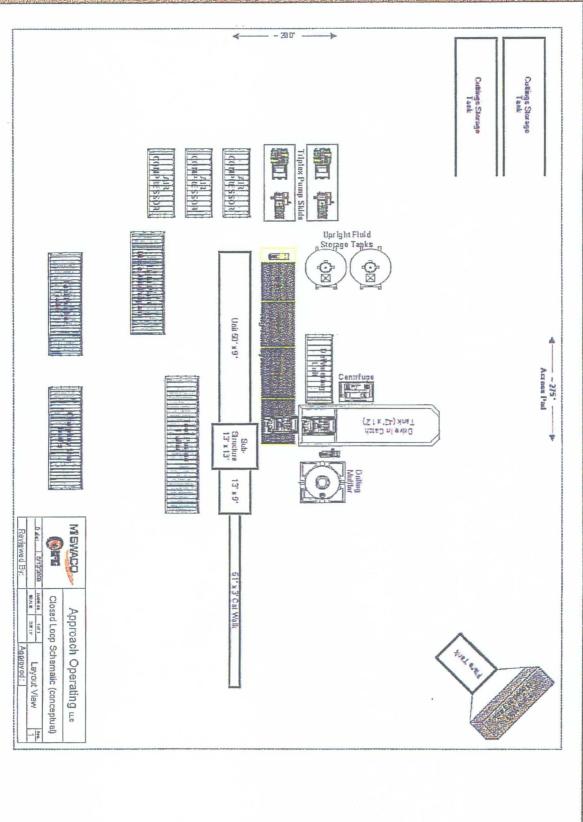
When the well is abandoned the location and access road will be cleaned and restored to the original topographical contours as much as possible. The area will be reseeded with appropriate seed mixture.

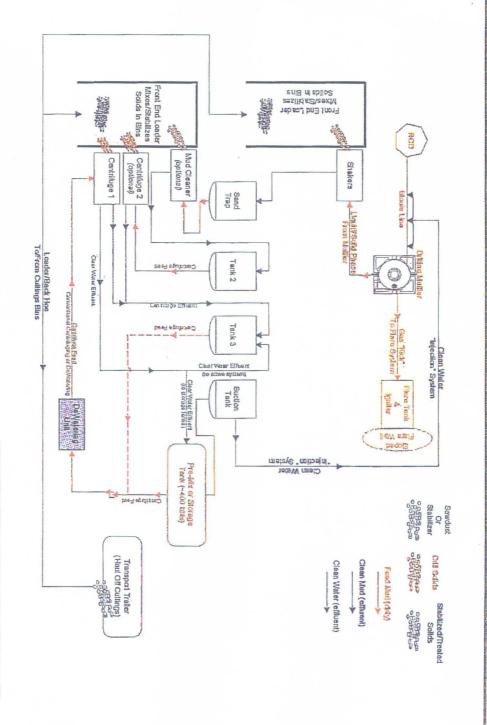
If the well is productive, areas not used in production will be contoured and seeded with stipulated seed mixture. Production equipment will be painted to blend with the natural color of the landscape.

11. Lessee's or Operator's Representative:

Glenn W. Reed, Executive Vice President – Engineering & Operations Approach Resources 6500 West Freeway, Suite 800 Fort Worth, Texas 76116 Phone: (817) 989-9000

Glenn W. Reed
Executive Vice President – Engineering & Operations





			Reviewed By:	Revie
Flow Process	3.6": 7	10 M 21		
	1 0/1	Pach Ho	0/13/2008	Daller
Closed Loop Schematic (conceptual	sed Loo	Clo		
Approach Operating LLC	Appro		ACC	MEIM

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

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.
For permanent pits and exceptions submit to the Santa Fe Environmental Burcau office and provide a copy to the appropriate NMOCD District Office.

Pit, Closed-Loop System, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application

Type of action: Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method

	system, below-grade tank, or proposed alternative method		
	ndividual pit, closed-loop system, below-grade tank or alternative request		
	ability should operations result in pollution of surface water, ground water or the ply with any other applicable governmental authority's rules, regulations or ordinances.		
Operator: Altroach Operating, LLC	OGRID#: 248343		
Address: 6500 West Freeway	Suite 800, Fort Worth, TX 76116		
Facility or well name: Cloyd Hinkle No. 1	, ,		
API Number: 30-039 -	OCD Permit Number:		
U/L or Qtr/Qtr K Section 18 Township 28	N Range 4 E County: Rio Arriba		
Center of Proposed Design: Latitude 36° 39 '3846" N	Longitude 106° 33' 13.02" W NAD: 1927 ☐ 1983		
Surface Owner: Federal State Private Tribal Trust or Indian Allotment			
Pit: Subsection F or G of 19.15.17.11 NMAC	Closed-loop System: Subsection H of 19.15.17.11 NMAC		
Temporary: Drilling Workover	Drying Pad Tanks Haul-off Bins Other		
Permanent Emergency Cavitation Steel Pit	Lined Unlined		
☐ Lined ☐ Unlined	Lincr type: Thickness WA mil LLDPE HDPE PVC		
Lincr type: Thicknessmil	Other		
Other String-Reinforced	Seams: Welded Factory Other		
Seams: Welded Factory Other	Volume: N/A bbl N/A yd³		
Volume: bbl Dimensions: L x W x D	Dimensions: Length // x Width // A		
Below-grade tank: Subsection I of 19.15.17.11 NMAC	Fencing: Subsection D of 19.45.17.11 NMAC		
Volume:bbl	Chain link, six feet in height, two strands of barbed wire at top		
Type of fluid:	Four foot height, four strands of barbed wire evenly spaced between one and		
Tank Construction material:	four feet		
Secondary containment with leak detection	Netting: Subsection E of 19.15.17.11 NMAC		
Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off	Screen Netting: Other		
☐ Visible sidewalls and liner	Monthly inspections		
Visible sidewalls only	Signs: Subsection C of 19.15.17.11 NMAC		
Other	12'x24', 2' lettering, providing Operator's name, site location, and		
Liner type: Thicknessmil HDPE PVC	emergency telephone numbers		
Other	Signed in compliance with 19.15.3.103 NMAC		
Alternative Method:	Administrative Approvals and Exceptions:		
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration	Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.		
of approval.	Please check a box if one or more of the following is requested, if not leave		
	blank: Administrative approval(s): Requests must be submitted to the		
	appropriate division district or the Santa Fe Environmental Bureau office for		
	consideration of approval.		
	Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.		

Siting Criteria (regarding permitting): 19.15.17.10 NMAC Instructions: The applicant must demonstrate comptiance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.	
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	Yes No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	Yes No
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	Yes No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	Yes No
Within the area overlying a subsurface minc. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	Yes No
Within a 100-year floodplain. - FEMA map	Yes No
Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the do attached. Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC	9 NMAC
Previously Approved Design (attach copy of design) API Number: or Permit Number:	
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the do attached. Geologic and Hydrogeologic Data (required for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of Siting Criteria Compliance Demonstrations (required for on-site closure) - based upon the appropriate requirements of 19.15.17.10 Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC	19.15.17.9
Previously Approved Design (attach copy of design) API Number:	

Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC			
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the do attached.	ocuments are		
Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Climatological Factors Assessment			
 Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC 			
Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC Quality Control/Quality Assurance Construction and Installation Plan			
Quality Control/Quality Assurance Construction and Installation Plan Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC	i		
Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC			
 Nuisance or Hazardous Odors, including H₂S, Prevention Plan Emergency Response Plan 			
Oil Field Waste Stream Characterization			
Monitoring and Inspection Plan			
☐ Erosion Control Plan ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC			
Proposed Closure: 19.15.17.13 NMAC			
Type: Drilling Workover Emergency Cavitation Permanent Pit Below-grade Tank Closed-loop System	7 Alternative		
Proposed Closure Method: Waste Executation and Removal	3 724011111110		
Waste Removal (Closed-loop systems only)			
On-site Closure Method (Only for temporary pits and closed-loop systems)			
☐ In-place Burial ☐ On-site Trench Burial ☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for contact the santa	nsideration)		
Siting Criteria (regarding on-site closure methods only): 19.15,17.10 NMAC			
Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable			
source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from	The state of the s		
the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10			
NMAC for guidance.			
Crown during in long them 50 feet helevy the hottom of the hunied west-	☐ Yes ☐ No		
Ground water is less than 50 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	NA NO		
	,		
Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yés ☐ No ☐ NA		
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA		
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).	☐ Yes ☐ No		
- Topographic map; Visual inspection (certification) of the proposed site			
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	Yes No		
Vithin 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock vatering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site			
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance	Yes No		
adopted pursuant to NMSA 1978, Section 3-27-3, as amended.			
- Written confirmation or verification from the municipality; Written approval obtained from the municipality			
Within 500 feet of a wetland.	☐ Yes ☐ No		
- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site			
Within the area overlying a subsurface mine.	☐ Yes ☐ No		
- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division			
Within an unstable area.			
- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological	☐ Yes ☐ No		
Society; Topographic map			
Within a 100-year floodplain.	☐ Yes ☐ No		

Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached. Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
 □ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings) □ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC □ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC □ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC
Waste Removal Closure For Closed-loop Systems That Utilize Haul-off Bins Only: (19.15.17.13.D NMAC) Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings.
Disposal Facility Name: TWI Environmental Inc. Disposal Facility Permit Number: WM-01-0008 On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate,
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate,
by a check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Construction and Design of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Disposal Facility Name and Permit Number (for liquide and drill outling arrive some on site closure standards cannot be exhibited.)
☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved) ☐ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC
Operator Application Certification:
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.
Name (Print): Brice A. Morgan Title: Landman
Name (Print):Brice A. MorganTitle:Landman
e-mail address: bmorgan@affroach resources.com Telephone: 817-989-9000
OCD Approval: Permit Application (including closure plan) Closure Plan (only)
OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Representative Signature: Approval Date:
OCD Representative Signature: Approval Date:
OCD Representative Signature: Approval Date: Title: OCD Permit Number: Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Completion Date:
OCD Representative Signature: Approval Date: Title: OCD Permit Number: Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC
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OCD Representative Signature: OCD Permit Number: Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Completion Date: Closure Method: Waste Excavation and Removal On-Site Closure Method Alternative Closure Method If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation
OCD Permit Number: Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13-NMAC Closure Completion Date: Waste Excavation and Removal On-Site Closure Method Alternative Closure Method If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation)
OCD Representative Signature: OCD Permit Number: Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Completion Date: Closure Method: Waste Excavation and Removal On-Site Closure Method Alternative Closure Method If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique
OCD Representative Signature: OCD Permit Number: Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Completion Date: Closure Method: On-Site Closure Method Alternative Closure Method If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice Proof of Closure Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Location: Latitude Longitude NAD: 1927 1983
OCD Representative Signature:
OCD Representative Signature:
OCD Representative Signature: OCD Permit Number: Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13-NMAC Closure Completion Date: Closure Method: Alternative Closure Method If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a checkmark in the box, that the documents are attached. Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Location: Latitude Longitude NAD: 1927 1983

APPROACH OPERATING, LLC. OPERATIONS PLAN

I. Location:

LAT

Date: June 18, 2008

LONG

Rio Arriba County, NM

Field: Wildcat

Flev: GL

Surface:

II. Drilling

A. Contractor: TBDB. Mud Program:

The surface hole will be drilled with a air, if possible, or fresh water mud.

The production hole will be drilled with air or air/mist.

C. Minimum Blowout Control Specifications:

Double ram type 3000 psi working pressure BOP with a rotating head. See the attached Exhibit # __ for details on the BOP equipment. All ram type preventers and related equipment will be hydraulically tested at nipple-up and after any use under pressure to 1500 psi.

The blind ram will be hydraulically activated and checked for operational readiness each time pipe is pulled out of the hole. All check of the BOP stack and equipment will be noted on the daily drilling report. The BOP equipment will include a kelly cock, floor safety valve, and choke manifold all rated to 2000 psi.

No over pressured zones are expected in this well. No H2S zones expected, but compliance packs will be on location.

III. Logging program: Induction / GR and density logs at TD.

IV. Materials

A. Casing Program:

Hole Size	Depth	Casing Size	Wt & Grade
12-1/4"	350'	9-5/8"	32.3# H-40
8-3/4"	2000	4-1/2"	10.5# J-55

B. Float Equipment

- a. Surface Casing: Notched collar on bottom and 3 centralizers on the bottom 3 joints.
- b. Production Casing: 4-1/2" whirler type cement nosed guide shoe and a float collar on top of the shoe joint. Centralized with bow spring centralizers

V. Cementing:

• Surface Casing: 9-5/8" 32.3 lb/ft H-40 set to 350'.

Cement 0-350'

Fluid 1: Water Based Spacer

Water Fluid Density: 8.330

lbm/gal

Fluid Volume: 10 bbl

Fluid 2: Lead Cement

Premium Cement Fluid Weight 15.600

lbm/gal

94 lbm/sk Premium Cement (Cement) Slurry Yield: 1.180 ft³/sk

0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive) Total Mixing Fluid: 5.238

Gal/sk

2 % Calcium Chloride (Accelerator) Top of Fluid: 0 ft

Calculated Fill: 350 ft

Volume: 42.139 bbl

Calculated Sacks: 200.503 sks

Proposed Sacks: 205 sks

Fluid 3: Water Based Spacer

Water Displacement Fluid Density: 8.330

lbm/gal

Fluid Volume: 23.966 bbl

• Production Casing: 4-1/2" 10.5 lb/ft J-55 casing set to TD.

Cement

Fluid Instructions

Fluid 1: Water Based Spacer

Water Fluid Density: 8.330

lbm/gal

Fluid Volume: 20 bbl

Fluid 2: Lead Cement

50/50 Poz Premium

0.4 % Halad(R)-344 (Low Fluid Loss Control)

Fluid Weight

13 lbm/gal

1.436 ft³/sk

0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive) Total Mixing Fluid: 6.193

Gal/sk

5 lbm/sk Gilsonite (Lost Circulation Additive) Top of Fluid: 0 ft

Calculated Fill: 2000 ft

Volume: 156.266 bbl

Calculated Sacks: 610.982 sks Proposed Sacks: 615 sks

Fluid 3: Water Based Spacer

Water Displacement Fluid Density: 8.330

lbm/gal

Fluid Volume: 31.197 bbl

• The wells will have 40° of 14" conductor set. Then a 12-1/4" hole will be drilled to about 350° when 9-5/8" surface casing will be set and cemented. We will drill out with a 8-3/4" bit using

MULTI-POINT SURFACE USE PLAN

1. Existing Roads:

When existing roads are used to access the proposed location they will be maintained in the same or better condition than presently found.

2. Planned Access Roads:

Some new access road will have to be constructed. If existing access road is also used, it will be maintained in at least the current condition and will be upgraded where necessary to provide uninterrupted access to the proposed well.

3. Location of Existing Wells:

Attached map (Plat # 1) shows existing wells within one mile radius of the proposed well. N/A

4. Location of Production Facilities:

In the event of production, production facilities will be located on the drill pad. The actual placement of this equipment will be determined when the well's production characteristics can be evaluated after completion.

To protect livestock and wildlife, equipment will be fenced. Any tanks will be enclosed by a dike.

Upon completion of drilling, the location and surrounding area will be cleared of all debris.

5. Water Supply:

Water for drilling and completion will be purchased from local sources.

6. Source of Construction Materials:

No additional construction materials will be required to build.

7. Methods of Handling Waste Disposal:

- a. The drill cuttings, fluids and completion fluids will be placed in the steel tanks. Upon completion, the pad will be leveled, contoured and reseeded with the appropriate seed mixture.
- b. All garbage and trash will be placed in a metal trash basket. It will be hauled off and dumped in an approved land fill upon completion of operations.
- c. Portable toilets will be provided and maintained during drilling operations.

8. Ancillary Facilities:

Ancillary facilities are to be based on well productivity. .

9. Well Site Layout:

A plat of the drill pad with location of drilling equipment and rig orientations also attached.

10. Plans for Restoration of Surface:

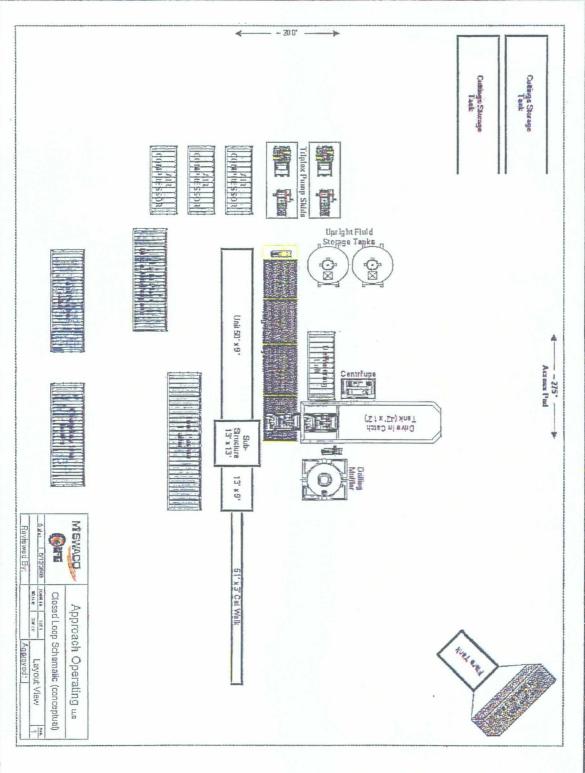
When the well is abandoned the location and access road will be cleaned and restored to the original topographical contours as much as possible. The area will be reseeded with appropriate seed mixture.

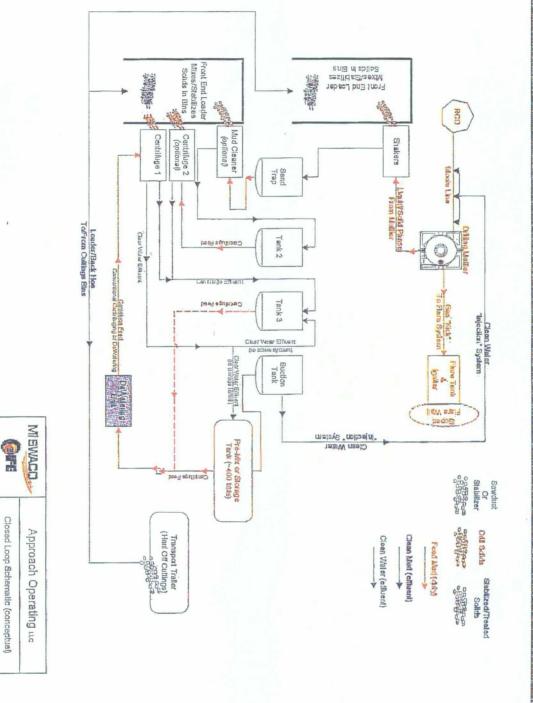
If the well is productive, areas not used in production will be contoured and seeded with stipulated seed mixture. Production equipment will be painted to blend with the natural color of the landscape.

11. Lessee's or Operator's Representative:

Glenn W. Reed, Executive Vice President – Engineering & Operations Approach Resources 6500 West Freeway, Suite 800 Fort Worth, Texas 76116 Phone: (817) 989-9000

Glenn W. Reed
Executive Vice President – Engineering & Operations





Reviewed By:

Approved:

Flow Process

- Hex

Form C-144 June 24, 2008

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
Department
Oil Conservation Division
1220 South St. Francis Dr.

Santa Fe. NM 87505

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.
For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Pit, Closed-Loop System, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application

	ystem, below-grade tank, or proposed alternative method system, below-grade tank, or proposed alternative method
	ndividual pit, closed-loop system, below-grade tank or alternative request
	ability should operations result in pollution of surface water, ground water or the ply with any other applicable governmental authority's rules, regulations or ordinances.
Operator: Approach Operating, LCC	OGRID#: 248343
Address: 6500 West Freeway, 30	SIFE OU F7. WOTIN 1X /6/16
Facility or well name: <u>ANTHONY GATCICA NO.</u>	
API Number: 30-039 -	OCD Permit Number: Number: Range 42 County: Rio Arriba
U/L or Qtr/Qtr Section /7 Township _ 28	N Range 42 County: Rio Afriba
Center of Proposed Design: Latitude 3, 39 37.8" N	Longitude 104° 31′46.3″ W NAD: \$\\$\1927 □ 1983
Surface Owner: 🔲 Federal 🔲 State 🔀 Private 🔲 Tribal Trust or Indian 2	Allotment
Pit: Subsection F or G of 19.15.17.11 NMAC	Closed-loop System: Subsection H of 19.15.17.11 NMAC
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Lined Unlined	Liner type: Thickness W/A mil LLDPE HDPE PVC
Liner type: Thicknessmil	Other
Other String-Reinforced	Seams: Welded Factory Other
Scams: Welded Factory Other	Volume: N/A bbl N/A yd ³
Volume: x W x D	Volume:
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Other	12'x24', 2' lettering, providing Operator's name, site location, and
Liner type: Thickness mil HDPE PVC	emergency telephone numbers
Other	Signed in compliance with 19.15.3.103 NMAC
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of approval.	Please check a box if one or more of the following is requested, if not leave blank: Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Burcau office for consideration of approval. Exception(s): Requests must be submitted to the Santa Fe

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Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. NM Office of the State Engineer - iWATERS database scarch; USGS; Data obtained from nearby wells	☐ Yes ☐ No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	Yes No
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	Yes No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	Yes No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	Yes No
Within an unstable area. - Engineering measures incorporated into the design; NM Burcau-of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No
Within a 100-year floodplain FEMA map	☐ Yes ☐ No
Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 Natructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the do attached. Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC	9 NMAC
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC	
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the do attached. Geologic and Hydrogeologic Data (required for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of Siting Criteria Compliance Demonstrations (required for on-site closure) - based upon the appropriate requirements of 19.15.17.11 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.9 NMAC and 19.15.17.13 NMAC NMAC	19.15.17.9
Previously Approved Design (attach copy of design) API Number:	

Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC	
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the de	ocuments are
 attached. Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Climatological Factors Assessment 	
Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC Quality Control/Quality Assurance Construction and Installation Plan Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC	
 Nuisance or Hazardous Odors, including H₂S, Prevention Plan Emergency Response Plan Oil Field Waste Stream Characterization Monitoring and Inspection Plan 	
Erosion Control Plan Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC	
Proposed Closure: 19.15.17.13 NMAC	
Type: Drilling Workover Emergency Cavitation Permanent Pit Below-grade Tank Closed-loop System	Alternative
Proposed Closure Method: Waste Excavation and Removal Waste Removal (Closed-loop systems only) On-site Closure Method (Only for temporary pits and closed-loop systems) In-place Burial On-site Trench Burial Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Burcau for control of the Santa Fe Env	
Siting Criteria (regarding on-site closure methods only): 19.15.17.10.NMAC	
Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.	
Ground water is less than 50 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is between 50 and 100 feet below the bottom of the buried waste NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is more than 100 feet below the bottom of the buried waste: - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Ycs ☐ No ☐ NA
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No
Within a 100-year-floodplain.	Yes No

Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached. Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings) Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC	
Waste Removal Closure For Closed-loop Systems That Utilize Haul-off Bins Only: (19.15.17.13.D NMAC) Instructions: Please indentify the facilities for the disposal of liquids, drilling fluids and drill cuttings. Disposal Facility Name: TNT ZNITON MENTAL INC. Disposal Facility Permit Number: Nu	ility
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indica	=
by a check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Construction and Design of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved) Soil Cover Design - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC	,
Operator Application Certification:	
I hersby contifue that the information submitted with this application is true, acquirate and complete to the hest of my knowledge and belief	
Name (Print): Brice A. Morgan Title: Landman	
Name (Print): Brice A. Morgan Title: Landman Signature: Date: 7-9-08	_
e-mail address: bMotgan@approachtesources.com Telephone: 817-989-9000	
OCD Approval: Permit Application (including closure plan) Closure Plan (only)	
OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Representative Signature: Approval Date:	
OCD Representative Signature: Approval Date:	
OCD Representative Signature: OCD Permit Number: Closure Report (required within 60 days of closure completion): Closure Method: Waste Excavation and Removal On-Site Closure Method If different from approved plan, please explain.	
OCD Permit Number: Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Completion Date: Waste Excavation and Removal On-Site Closure Method Alternative Closure Method If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a checkmark in the box, that the documents are attached. Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation)	
OCD Representative Signature:	:k
OCD Permit Number: Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Completion Date: Waste Excavation and Removal On-Site Closure Method Alternative Closure Method If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a checkmark in the box, that the documents are attached. Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation)	
OCD Representative Signature:	
OCD Representative Signature: OCD Permit Number: Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Closure Completion Date: Closure Method: Closure Method: If different from approved plan, please explain. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a checknark in the box, that the documents are attached. Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Location: Latitude Longitude NAD: 1927 1983 Departor Closure Certification: hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.	

APPROACH OPERATING, LLC. OPERATIONS PLAN

I. Location:

LAT

Date: June 18, 2008

LONG

Rio Arriba County, NM

Field: Wildcat

Elev: GL

Surface:

II. Drilling

A. Contractor: TBD B. Mud Program:

The surface hole will be drilled with a air, if possible, or fresh water mud.

The production hole will be drilled with air or air/mist.

C. Minimum Blowout Control Specifications:

Double ram type 3000 psi working pressure BOP with a rotating head. See the attached Exhibit # __ for details on the BOP equipment. All ram type preventers and related equipment will be hydraulically tested at nipple-up and after any use under pressure to 1500 psi.

The blind ram will be hydraulically activated and checked for operational readiness each time pipe is pulled out of the hole. All check of the BOP stack and equipment will be noted on the daily drilling report. The BOP equipment will include a kelly cock, floor safety valve, and choke manifold all rated to 2000 psi.

No over pressured zones are expected in this well. No H2S zones expected, but compliance packs will be on location.

III. Logging program: Induction / GR and density logs at TD.

IV. Materials

A. Casing Program:

Hole Size	Depth	Casing Size	Wt & Grade
12-1/4"	350'	9-5/8"	32.3# H-40
8-3/4**	2000	4-1/2"	10.5# J-55

B. Float Equipment

- a. Surface Casing: Notched collar on bottom and 3 centralizers on the bottom 3 joints.
- b. Production Casing: 4-1/2" whirler type cement nosed guide shoe and a float collar on top of the shoe joint. Centralized with bow spring centralizers

V. Cementing:

• Surface Casing: 9-5/8" 32.3 lb/ft H-40 set to 350'.

Cement 0-350'

Fluid 1: Water Based Spacer

Water Fluid Density: 8.330

Ibm/gal Fluid Volume: 10 bbl

Fluid 2: Lead Cement

Premium Cement Fluid Weight 15.600

lbm/gal

94 lbm/sk Premium Cement (Cement) Slurry Yield: 1.180 ft³/sk

0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive) Total Mixing Fluid: 5.238

Gal/sk

2 % Calcium Chloride (Accelerator)

Top of Fluid: 0 ft
Calculated Fill: 350 ft

Volume: 42.139 bbl

Calculated Sacks: 200.503 sks

Proposed Sacks: 205 sks

Fluid 3: Water Based Spacer

Water Displacement Fluid Density: 8.330

Ibm/gal

Fluid Volume: 23.966 bbl

• Production Casing: 4-1/2" 10.5 lb/ft J-55 casing set to TD.

Cement

Fluid Instructions

Fluid 1: Water Based Spacer

Water Fluid Density: 8.330

lbm/gal

Fluid Volume: 20 bbl

Fluid 2: Lead Cement

50/50 Poz Premium Fluid Weight 13 lbm/gal 0.4 % Halad(R)-344 (Low Fluid Loss Control) Sluiry Yield: 1.436 ft³/sk

0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive) Total Mixing Fluid: 6.193

Gal/sk

5 lbm/sk Gilsonite (Lost Circulation Additive) Top of Fluid: 0 ft

Calculated Fill: 2000 ft

Volume: 156.266 bbl

31.197 bbl

Calculated Sacks: 610.982 sks

Proposed Sacks: 615 sks

Fluid 3: Water Based Spacer

Water Displacement Fluid Density: 8,330

lbm/gal Fluid Volume:

• The wells will have 40' of 14" conductor set. Then a 12-1/4" hole will be drilled to about 350' when 9-5/8" surface casing will be set and cemented. We will drill out with a 8-3/4" bit using

MULTI-POINT SURFACE USE PLAN

1. Existing Roads:

When existing roads are used to access the proposed location they will be maintained in the same or better condition than presently found.

2. Planned Access Roads:

Some new access road will have to be constructed. If existing access road is also used, it will be maintained in at least the current condition and will be upgraded where necessary to provide uninterrupted access to the proposed well.

3. Location of Existing Wells:

Attached map (Plat # 1) shows existing wells within one mile radius of the proposed well. N/A

4. <u>Location of Production Facilities:</u>

In the event of production, production facilities will be located on the drill pad. The actual placement of this equipment will be determined when the well's production characteristics can be evaluated after completion.

To protect livestock and wildlife, equipment will be fenced. Any tanks will be enclosed by a dike.

Upon completion of drilling, the location and surrounding area will be cleared of all debris.

5. Water Supply:

Water for drilling and completion will be purchased from local sources.

6. Source of Construction Materials:

No additional construction materials will be required to build.

7. Methods of Handling Waste Disposal:

- a. The drill cuttings, fluids and completion fluids will be placed in the steel tanks. Upon completion, the pad will be leveled, contoured and reseeded with the appropriate seed mixture.
- b. All garbage and trash will be placed in a metal trash basket. It will be hauled off and dumped in an approved land fill upon completion of operations.
- c. Portable toilets will be provided and maintained during drilling operations.

8. Ancillary Facilities:

Ancillary facilities are to be based on well productivity. .

9. Well Site Layout:

A plat of the drill pad with location of drilling equipment and rig orientations also attached.

10. Plans for Restoration of Surface:

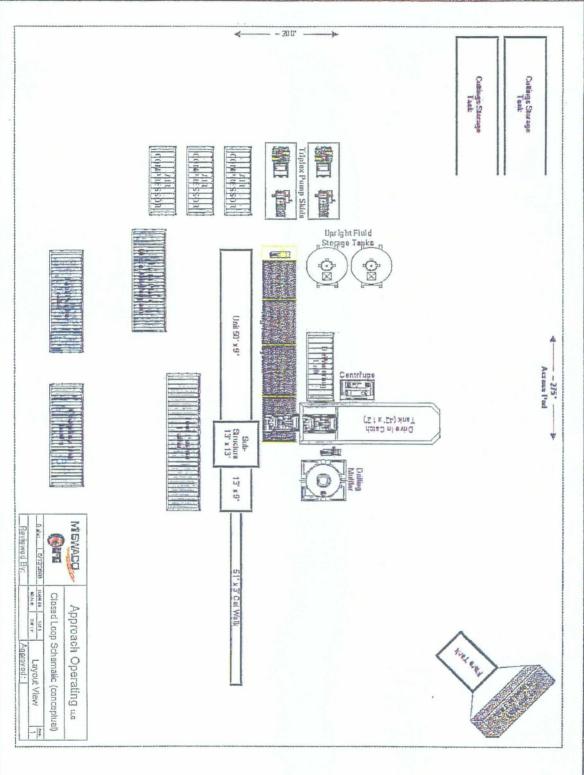
When the well is abandoned the location and access road will be cleaned and restored to the original topographical contours as much as possible. The area will be reseeded with appropriate seed mixture.

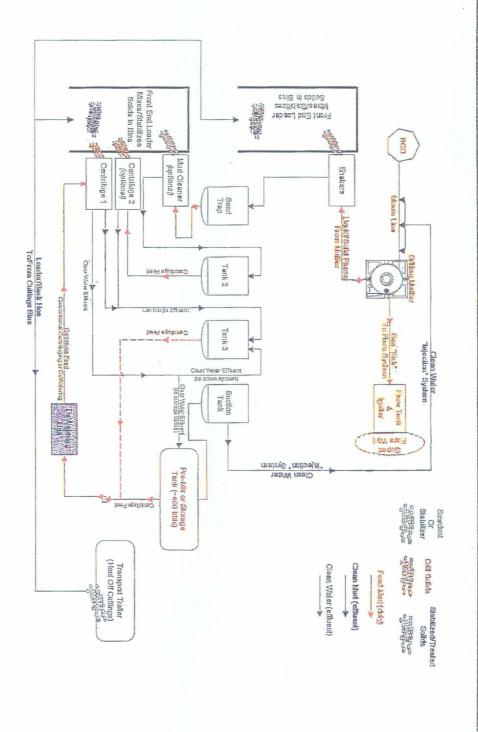
If the well is productive, areas not used in production will be contoured and seeded with stipulated seed mixture. Production equipment will be painted to blend with the natural color of the landscape.

11. Lessee's or Operator's Representative:

Glenn W. Reed, Executive Vice President – Engineering & Operations Approach Resources 6500 West Freeway, Suite 800 Fort Worth, Texas 76116 Phone: (817) 989-9000

Glenn W. Reed
Executive Vice President – Engineering & Operations





	Approved:			ewed By:	Review
	LION LIOCES	11,9'6	SCALE		
Hev.		1 0/1	PECULIO	90000 Mg	Duli
	Closed Loop Schematic (conceptual)	sed Loo	Clo		
	pproach Operating	Appro		ACO	MEM