

C-147 Registration Application Form

Bebop Containment & Recycling Facility

July 31, 2017

SITING REQUIREMENTS

1. DISTANCE TO GROUNDWATER

Figure 1 shows the nearest active water wells to the recycling containment. A borehole was completed by Phoenix Environmental and the results are shown in Figure 2. A bore-hole was drilled down to 100' and was left open for twenty-four hours. No groundwater was encountered down to this depth.

2. DISTANCE TO MUNICIPAL BOUNDARIES AND FRESH WATER FIELDS

Figure 1 also illustrates that the recycling containment is not located within incorporated municipal boundaries or within defined municipal fresh water well fields covered by a municipal ordinance pursuant to Section 3-27-3 NMSA 1978 as amended.

3. DISTANCE TO SUBSURFACE MINES

Based off local knowledge of the area and according to the NM EMNRD Mining and Minerals Division there are no subsurface mines within the proximity of the recycling containment. Figure 3 shows the active mines within Eddy County in respect to the location of the recycling containment

4. DISTANCE TO KARST FEATURES

Figure 4 shows the recycling containment is located within a BLM-identified medium potential karst zone. BLM inventory data of existing karst features are indicated in the figure and verify that the recycling containment is not located within an unstable area.

5. DISTANCE TO 100 YEAR FLOODPLAINS

Based off of information from the Federal Emergency Management Agency, the recycling containment is located within the FEMA identified Zone D. Figure 5 demonstrates that the area is not located within a 100-year floodplain.

6. DISTANCE TO SURFACE WATER

Figure 6 illustrates that the recycling containment is not located 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).

7. DISTANCE TO PERMANENT RESIDENCE OR INSTITUTIONS

Figure 7 illustrates that the recycling containment is not located within 1,000 feet of a permanent residence, school, hospital, institution or church in existence at the time of this initial registration.

8. DISTANCE TO DOMESTIC AND STOCK WATER SUPPLIES

Figure 8 illustrates that the recycling containment is not located within 500 feet of a spring or fresh water well used for domestic or stock watering purposes at the time of this initial registration. The nearest domestic water listed is 6350 feet to the southwest of the recycling containment.

9. DISTANCE TO WETLANDS

Figure 6 illustrates that the recycling containment is not located within 500 feet of any identified wetland.

DESIGN AND CONSTRUCTION PLAN

10. PROJECT OVERVIEW

The following bullet points will be followed and met during the construction of the recycling containment:

- The recycling containment will be constructed to ensure the confinement of produced water, to prevent releases and to prevent overtopping due to wave action or rainfall
- The foundation will be properly constructed and interior slopes will consist of a firm unyielding base that will be smooth and free of rocks, debris or and sharp edges that may penetrate the liner.
- 10 ounce geotextile will be laid on the base of the containment to add another layer of protection for the liner from any sharp edges.
- A levee will be constructed with an inside and outside grade of three horizontal feet to one vertical foot (3H:1V).
- The recycling containment will be constructed with a 60 mil HDPE conductive primary liner and a 40 mil HDPE secondary liner.
- The edges of both liners will be anchored with an 24-inch deep compacted earth-filled
- Liner seems will minimized and will oriented up and down, not across, the slope of the levee. Factory welded seams will be used anywhere possible and no horizontal seams will be within five feet of the slope's toe.

Bebop Containment & Recycling Facility MOC

- All field seems will be tested and logged to ensure the seams are thermally sealed.
- The conductive primary liner will be spark tested to ensure no cuts are present.
- The liner will be protected from excessive hydrostatic force or mechanical damage. External discharge or suction lines will not penetrate the liner.
- The recycling containment will be constructed with a leak detection system between the primary and secondary liner. The leak detection system will consist of 200-mil geonet and will be sloped to facilitate the earliest possible leak detection.
- The containment will be designed to prevent run-on of surface water. Diversion ditches will be used where necessary.

11. STOCKPILING OF TOPSOIL

Topsoil will be stockpiled beside the recycling containment and will be used as final layer at the time of the enclosure of the containment.

12. SIGNS

Mewbourne Oil Co will provide easily read sign(s) in a conspicuous place around the perimeter of the fence that will include:

- The operator's name
- The location of the site by quarter-quarter, section, township and range
- Emergency telephone numbers

13. FENCING

An 8-foot tall game fence will be provided around the perimeter of the containment to deter an unauthorized human or wildlife access. Gates will be used for authorized personnel only and will be kept locked at all times.

14. NETTING AND WILDLIFE PLAN

The fence indicated above will be effective in excluding any terrestrial wildlife. Due to infeasibility of installing netting on the recycling containment of this magnitude, an audible avian deterrence system will be installed similar to setups by other operators in southeast New Mexico. The system has provided effective protection for migratory birds.

Mewbourne Oil will inspect the containment monthly and will report to NM Game and Fish Department and NMOCD any dead migratory birds within 30 days.

OPERATING AND MAINTENANCE PLAN

15. Overview

The recycling containment will be operated and maintained to contain liquids and solids and maintain the liner system in a manner that prevents contamination of fresh water and protects public health and the environment as described below. The purpose of this lined containment is to facilitate recycling, reuse, and reclamation of produced water from nearby oil and gas wells to be used in new well completions. When the treated produced water is not needed for completion of new wells, it will be pumped to and injected in a third party authorized SWD. This containment will not be used for the disposal of produced water or other oilfield waste.

The operation of the Recycling Containment is outlined below:

- Produced water from nearby oil and gas wells will be pumped via permanent pipeline to the treatment system near the recycling containment.
- After being treated, the produced water will be pumped into the recycling containment.
- When sufficient volume is reached in the recycling containment, it will be removed from the containment and used for either well stimulation (hydraulic fracturing) or drilling below fresh water zones (beneath surface casing).
- When the containment reaches maximum capacity, either treatment and discharge to the containment will cease or current plans will have a permanent 12-inch line in place to send treated produced water to a separate recycling containment in the same area.
- Accurate records will be kept and monthly reports will be sent in showing the total volume of water received for recycling, with the amount of fresh water received listed separately, and the total volume of water leaving the facility for disposition by use on form C-148.
- Inspections will be performed regularly and records will also be kept that identify sources and disposition of all recycled water and will be made available for review upon request.
- These inspections will include monitoring the leak detection system to make sure the primary liner has not been compromised; removal of any visible layer of oil from the liquid surface and verification that the three foot freeboard is being maintained.
- If a liner breach is identified above the liquid surface, the liner will be repaired or replaced within 48 hours. Alternatively, the NMOCD district office will be contacted within 48 hours to seek and extension for the liner repair or replacement.
- If a liner breach is identified below the liquid surface, all liquid above the identified breach will be removed, the NMOCD district office will be notified and the liner repair or replacement will be initiated within 48 hours of discovery.

- The berm will be visually inspected to ensure the integrity and condition is such to prevent surface water run-on.
- Finally, oil absorbent pads will be kept on site to contain an unexpected release.

The recycling containment shall be deemed to have ceased operations if less than 20% of the total fluid capacity is used every six months following the first withdrawal of produced water for use. Records will be kept using form C-148. If these records indicate that less than 20% of the total fluid capacity is used within six months, the appropriate division district office will be notified.

CLOSURE PLAN

After operations cease (insufficient volume used or permit expires), all fluids will be removed within 60 days and the recycling containment will be closed within six months. All removed liquids, solids and liner materials will be removed and transferred to a NMOCD-approved disposal facility within six months.

A five-point composite sample will be collected from beneath the containment and anywhere soils are stained or wet and tested for contamination. The samples will be analyzed for the criteria listed in Table 1 of 19.15.34.14 NMAC.

- If the contaminant concentration is higher than the parameters listed in Table 1, the NMOCD district office will be notified and a request will be submitted before completing the enclosure on the containment.
- If all parameters from Table 1 are met, closure will proceed by backfilling with non-waste containing, uncontaminated, earthen material.

Within 60 days of closure completion, a closure report on form C-147, including required attachments, will be submitted to document all closure activities including sampling results and details of any backfilling, capping, or covering, where applicable. The closure report will certify that all information in the report and attachments is correct and that all applicable closure requirements and conditions have been met.

Once the containment has been closed, the containment's location will be reclaimed to a safe and stable condition that blends with the surrounding undisturbed area. Top soils and subsoils will be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability, and preservation of surface water flow patterns. The area will then be reseeded in the first favorable growing season following the enclosure of the recycling containment as to best restore the area to the condition that existed prior to the construction of the containment.

Reclamation of the area will be considered complete when all ground surface disturbing activities at the site have been completed, and a uniform vegetative cover has been established that reflects a life-form

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ratio of plus or minus 50% of pre-disturbance levels and a total percent plant cover of at least 70% of pre-disturbance levels, excluding noxious weeds.

Surface reclamation obligations imposed by the BLM or the NM State Trust Land on lands managed by those agencies will supersede these requirements, provided that these other requirements provide equal or greater protection of fresh water, human health, and the environment.

The NMOCD district division office will be notified when the reclamation and re-vegetation are complete.

FINANCIAL ASSURANCE REQUIREMENTS

Mewbourne Oil Company has an existing financial assurance in place with NMOCD as required by 19.15.8 NMAC. Use of the recycling containment will be used solely for wells owned or operated by MOC.

VARIANCE REQUESTS

Netting

Due to the size and infeasibility of constructing and maintaining a netting system over a containment of this size, Mewbourne is requesting an alternative solution. The recycling containment will instead be equipped with an audible avian protection system. This system will be designed to deter birds from approaching the containment. Mewbourne will use the Bird-X Mega Blaster PRO. This device has been used by other operators with registered recycling containments in southeast New Mexico as an effective means of deterring birds.

Figures

Boundary References



Figure 1: Nearest Water Wells



Figure 2: Borehole Log



THE DRILLING PROFESSIONALS

Soil Boring Log

Client	Phoenix Environmental LLC	
Contractor	HCI Drilling	
Date Completed	07/15/2017	
Location	Bebop	
Soil Boring Number	SB-1	
Lithology		
0' - 22'	Caliche – White	
22' – 50'	Sand – Brown	
50' – 55'	Red Clay	
55' – 100'	Sand – Brown	
GPS Coordinates	32.093544, 103.58146	

Copies: Email (Phoenix Env)

Figure 3: Subsurface Mine Locations

	T21S	T21S	T21S	T215	T21S
	R29E	R30E	R31E	R32E	R33E
	T225	T22S	T22S	T22S	T22S
	R29E	R30Ē	R31E	R32E	R33E
	T235	T23S	T23S	T23S	T23S
	R29E	R30E	R31E	R32E	R33E
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	T245	T24S	T24S	T245	T24S
	R29E	R30E	R31E	R32E	R33E
	T25S R29E	T25S R30E	T25S R31E Bebop PW Cor	T25S R32E ntainment	T25S R33E

Figure 4: Karst Features

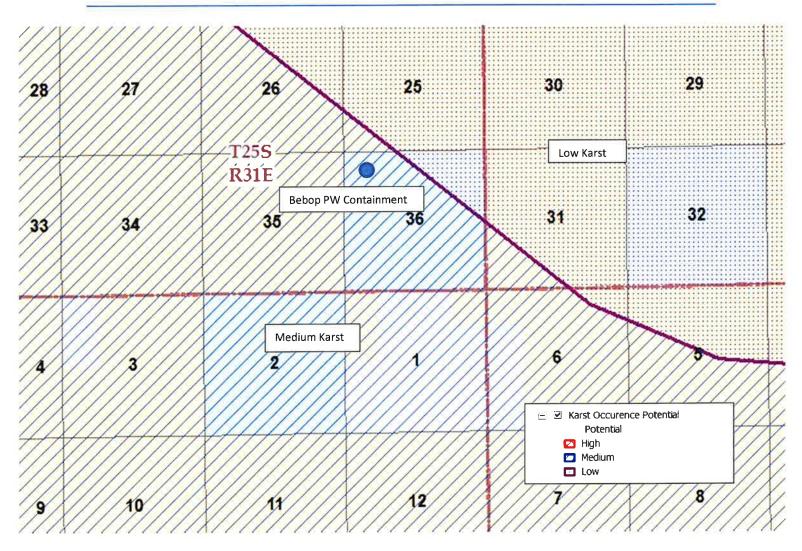


Figure 5: 100 Year Floodplain

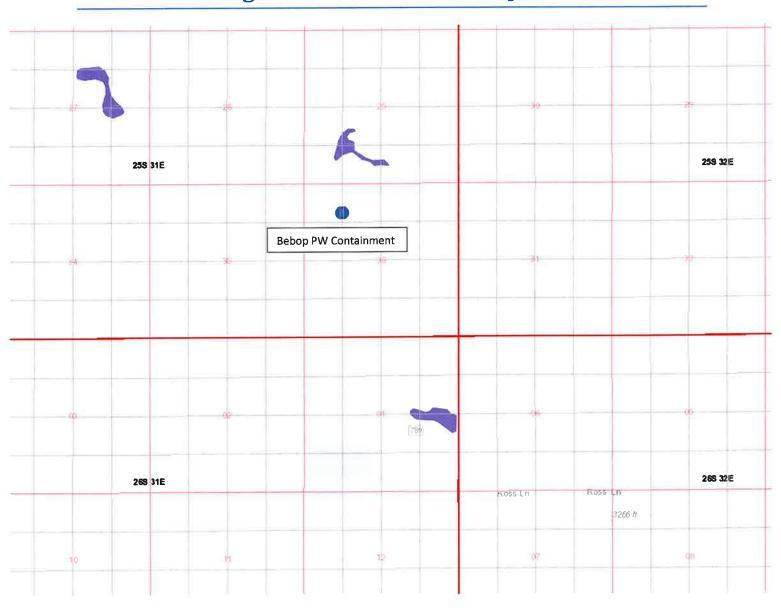


Figure 6: Distance to Surface Water

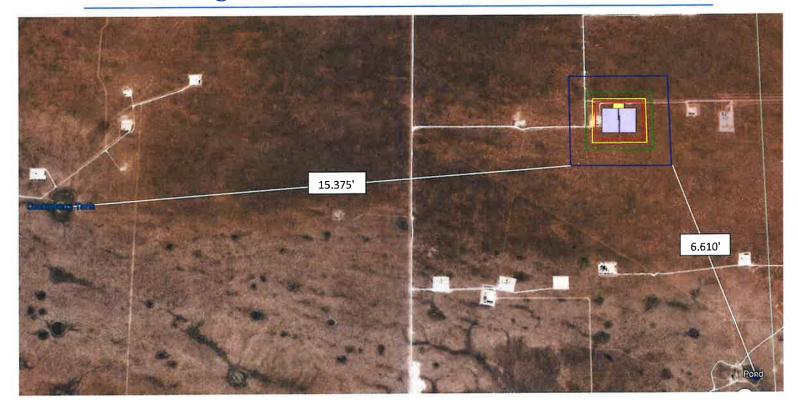


Figure 7: Distance to Residence

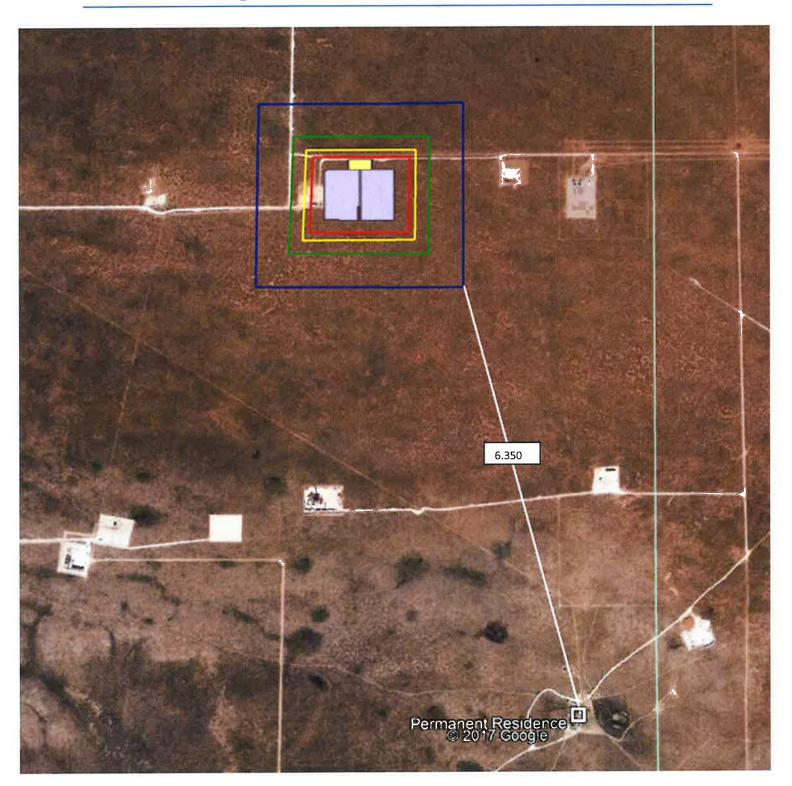
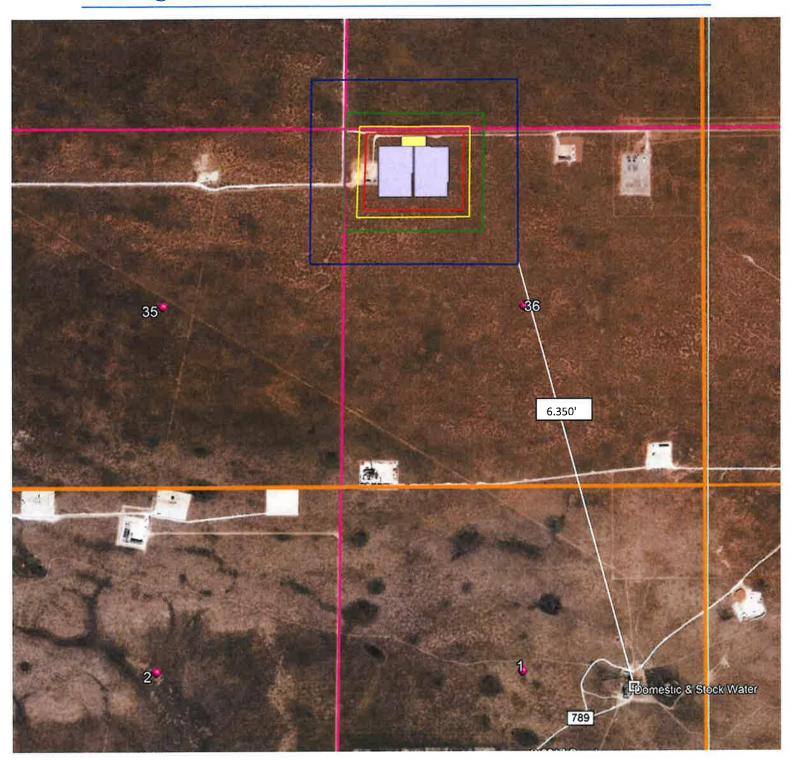
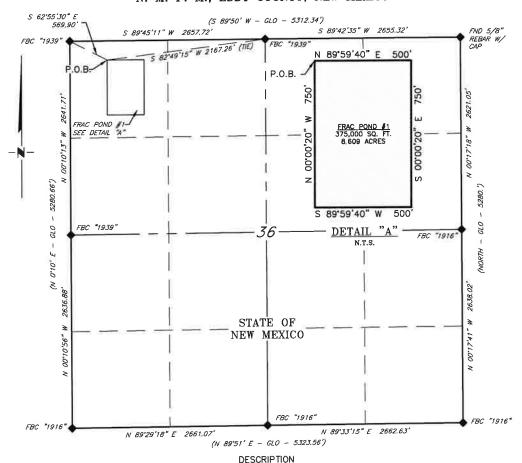


Figure 8: Distance to Stock & Domestic Water



Survey Plats

MEWBOURNE OIL COMPANY SURVEY OF THE PROPOSED BEBOP FRAC POND #1 NW 1/4, NW 1/4 SECTION 36, T25S, R31E N. M. P. M., EDDY COUNTY, NEW MEXICO



A tract of land situated within the NW 1/4 of the NW 1/4 of Section 36, Township 25 South, Range 31 East, N. M. P. M. Eddy County, New Mexico, across State of New Mexico land, and being more particularly described by metes and bounds as follows:

BEGINNING at a point which bears, S 82°49'15" W, 2,167.26 feet from a brass cap, stamped "1939", found for the North quarter corner of Section 36 and being S 82°55'30" E, 569.90 feet from a brass cap, stamped "1939", found for the Northwest corner of Section 36;

375,000 Sq. Ft.

Thence N 89'59'40" E, 500.00 feet, to a point;

Thence S 00°00'20" E, 750.00 feet, to a point;

Thence S 89°59'40" W, 500.00 feet, to a point;

Thence N 00'00'20" W, 750.00 feet, to the Point of Beginning.

Said tract of land contains 375,000 square feet or 8.609 acres, more or less. NW 1/4 NW 1/4

1" = 1000" 500' 1000'

BEARINGS ARE GRID NAD 83 NM EAST DISTANCES ARE HORIZ. GROUND.

LEGEND

RECORD DATA - GLO FOUND MONUMENT AS NOTED

I, R. M. Howett, a N. M. Professional Surveyor, hereby I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

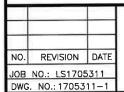
8.609 Acres

Robert M. Howell

NM PS 19680 Robert M. Howett

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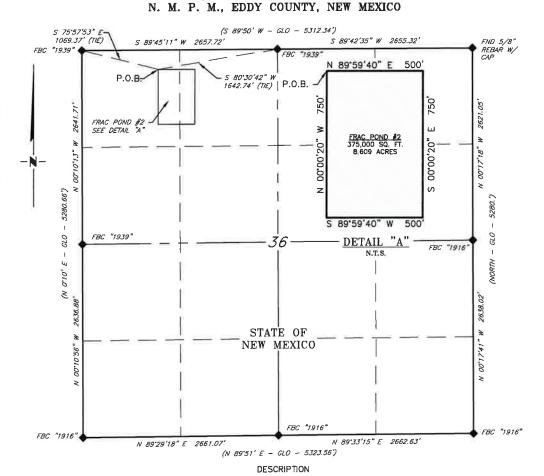




SCALE: 1" = 1000" DATE: 7-05-17 SURVEYED BY: ML/JL DRAWN BY: LPS APPROVED BY: RMH SHEET: 1 OF 2

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

MEWBOURNE OIL COMPANY SURVEY OF THE PROPOSED BEBOP FRAC POND #2 NW 1/4, SECTION 36, T25S, R31E



A tract of land situated within the NW 1/4 of Section 36, Township 25 South, Range 31 East, N. M. P. M. Eddy County, New Mexico, across State of New Mexico land, and being more particularly described by metes and bounds as follows:

BEGINNING at a point which bears, S 80°30′42″ W, 1,642.74 feet from a brass cap, stamped "1939", found for the North quarter corner of Section 36 and being S 75°57′53″ E, 1,069.37 feet from a brass cap, stamped "1939", found for the Northwest corner of Section 36;

Thence N 89°59'40" E, 500.00 feet, to a point;

Thence S 00°00'20" E, 750.00 feet, to a point;

Thence S 89*59'40" W, 500.00 feet, to a point;

Thence N 00°00'20" W, 750.00 feet, to the Point of Beginning.

Said tract of land contains 375,000 square feet or 8.609 acres, more or less, and allocated by forties as follows:

NW 1/4 NW 1/4 220,133 Sq. Ft. 5.054 Ac. NE 1/4 NW 1/4 154,867 Sq. Ft. 3.555 Ac.

SCALE: 1" = 1000' 0 500' 1000'

BEARINGS ARE GRID NAD 83 NM EAST DISTANCES ARE HORIZ. GROUND.

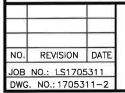
LEGEND

RECORD DATA — GLO
FOUND MONUMENT
AS NOTED

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

Robert M. Howett NM PS 19680

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SCALE: 1" = 1000'

DATE: 7-05-17

SURVEYED BY: ML/JL

DRAWN BY: LPS

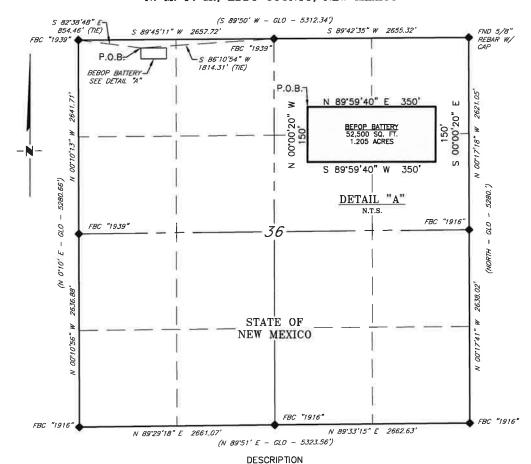
APPROVED BY: RMH

SHEET: 2 OF 2

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308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

MEWBOURNE OIL COMPANY SURVEY OF THE PROPOSED BEBOP BATTERY NW 1/4, NW 1/4 SECTION 36, T25S, R31E N. M. P. M., EDDY COUNTY, NEW MEXICO



A tract of land situated within the NW 1/4 of the NW 1/4 of Section 36, Township 25 South, Range 31 East, N. M. P. M. Eddy County, New Mexico, across State of New Mexico land, and being more particularly described by metes and bounds as follows:

BEGINNING at a point which bears, S 86"10'54" W, 1,814.31 feet from a brass cap, stamped "1939", found for the North quarter corner of Section 36 and being S 82'38'48" E, 854.46 feet from a brass cap, stamped "1939", found for the Northwest corner of Section 36;

Thence N 89'59'40" E, 350.00 feet, to a point;

Thence S 00°00'20" E, 150.00 feet, to a point;

Thence S 89°59'40" W, 350.00 feet, to a point;

Thence N 00'00'20" W, 150.00 feet, to the Point of Beginning.

Said tract of land contains 52,500 square feet or 1.205 acres, more or less.

1" = 1000' 500' 1000

BEARINGS ARE GRID NAD 83 NM EAST DISTANCES ARE HORIZ. GROUND.

LEGEND

DWG. NO.: 2-1705312

RECORD DATA - GLO

FOUND MONUMENT AS NOTED

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief. Robert M.

Howell NM PS 19680 Robert M. Howett

REVISION DATE JOB NO.: LS1705312

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200 SCALE: 1" = 1000 DATE: 5-23-17 SURVEYED BY: ML/JL DRAWN BY: KAKN APPROVED BY: RMH 2 OF 7 SHEET:

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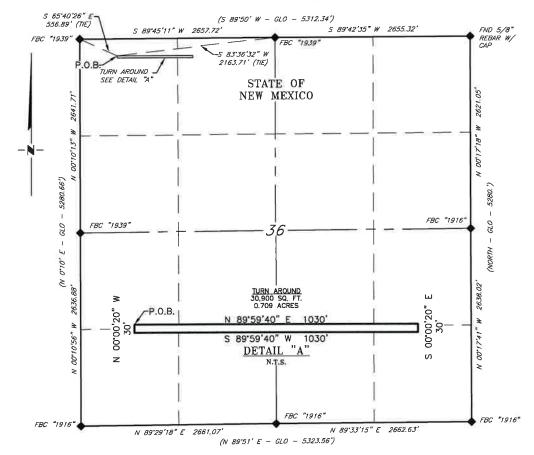
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MEWBOURNE OIL COMPANY SURVEY OF THE PROPOSED BEBOP TURN AROUND SECTION 36, T25S, R31E

N. M. P. M., EDDY COUNTY, NEW MEXICO



DESCRIPTION

A tract of land situated within the NW 1/4 of Section 36, Township 25 South, Range 31 East, N. M. P. M. Eddy County, New Mexico, across State of New Mexico land, and being more particularly described by metes and bounds as follows:

BEGINNING at a point which bears, S 83*36*32" W, 2,163.71 feet from a brass cap, stamped "1939", found for the North quarter corner of Section 36 and being S 65*40'26" E, 556.89 feet from a brass cap, stamped "1939", found for the Northwest corner of Section 36;

Thence N 89'59'40" E, 1030.00 feet, to a point;

Thence S 00°00'20" E, 30.00 feet, to a point;

Thence S 89°59'40" W, 1030.00 feet, to a point;

Thence N 00°00'20" W, 30.00 feet, to the Point of Beginning.

Said tract of land contains 30,900 square feet or 0.709 acres, more or less, and allocated by forties as follows:

SCALE: 1" = 1000' 0 500' 1000'

BEARINGS ARE GRID NAD 83 NM EAST DISTANCES ARE HORIZ. GROUND.

LEGEND

() RECORD DATA - GLO

FOUND MONUMENT
AS NOTED

NE 1/4 NW 1/4 6,232 Sq. Ft. 0.143 Ac. NW 1/4 NW 1/4 24,668 Sq. Ft. 0.566 Ac.

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

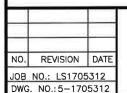
Robert M. Howett NM PS 19680

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SCALE: 1" = 1000' DATE: 5-23-17

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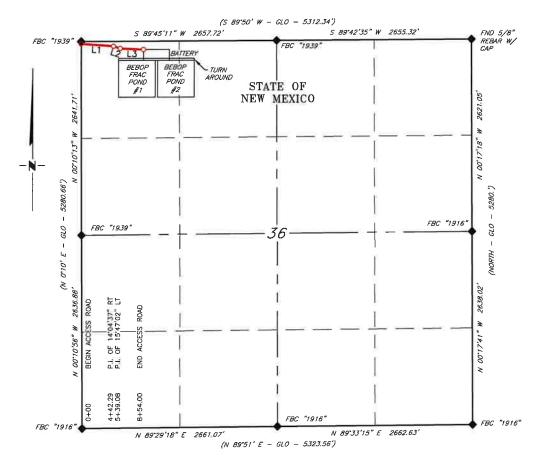


SURVEYED BY: ML/JL
DRAWN BY: KAKN
APPROVED BY: RMH
SHEET: 5 OF 7

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

MEWBOURNE OIL COMPANY SURVEY OF THE PROPOSED BEBOP BATTERY, FRAC PONDS, AND ACCESS ROAD

SECTION 36, T25S, R31E N. M. P. M., EDDY COUNTY, NEW MEXICO



	LINE TABLE	
LINE	BEARING	LENGTH
L1	S 85'35'12" E	442.29'
L2	S 71°30′35" E	96.79'
L3	S 87'17'37" E	314.92'

1" = 1000 1000

BEARINGS ARE GRID NAD 83 NM EAST DISTANCES ARE HORIZ. GROUND.

LEGEND

RECORD DATA - GLO FOUND MONUMENT AS NOTED

PROPOSED ACCESS ROAD

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

Robert M Howell

Robert M. Howett

NM PS 19680

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-83	308	W.	BROADWAY	ST.,	HOBBS,	NM	88240	(575)	964-820	00
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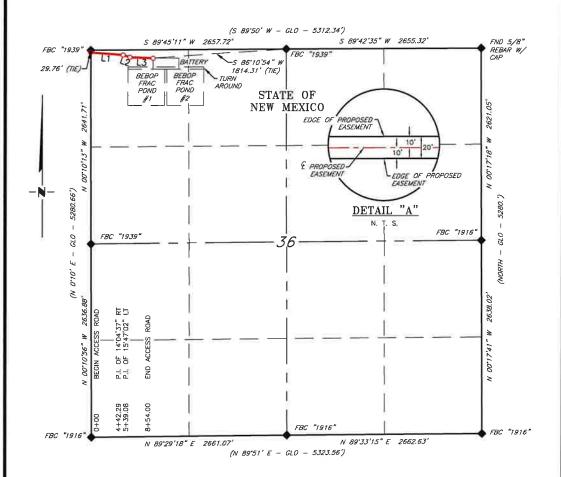
SCALE: 1" = 1000 DATE: 5-23-17 SURVEYED BY: ML/JL DRAWN BY: KAKN APPROVED BY: RMH 1 OF 7 SHEET:

REVISION DATE JOB NO.: LS1705312 DWG. NO.: 1-1705312



MEWBOURNE OIL COMPANY SURVEY OF THE PROPOSED ACCESS ROAD TO THE BEBOP FRAC PONDS AND BATTERY SECTION 36, T25S, R31E

N. M. P. M., EDDY COUNTY, NEW MEXICO



	LINE TABLE	
LINE	BEARING	LENGTH
L1	S 85*35'12" E	442.29'
L2	S 71*30'35" E	96.79'
L3	S 87'17'37" E	314.92'

500' 1000

BEARINGS ARE GRID NAD 83 NM EAST DISTANCES ARE HORIZ. GROUND.

LEGEND

RECORD DATA - GLO FOUND MONUMENT AS NOTED

PROPOSED ACCESS ROAD

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

Howett Robert M.

Robert M. Howett

NM PS 19680

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SCALE: 1" = 1000 DATE: 5-23-17 SURVEYED BY: ML/JL DRAWN BY: KAKN APPROVED BY: RMH SHEET: 6 OF 7

REVISION JOB NO.: LS1705312 DWG. NO.: 6-1705312



MEWBOURNE OIL COMPANY SURVEY OF THE PROPOSED ACCESS ROAD TO THE BEBOP FRAC PONDS AND BATTERY

SECTION 36, T25S, R31E N. M. P. M., EDDY COUNTY, NEW MEXICO

DESCRIPTION

A strip of land 20 feet wide, being 854.00 feet or 51.758 rods in length, lying in Section 36, Township 25 South, Range 31 East, N. M. P. M., Eddy County, New Mexico, being 10 feet left and 10 feet right of the following described survey of a centerline across State of New Mexico land:

BEGINNING at Engr. Sta. 0+00, a point on the West line of Section 36, which bears, S 00°10′13″ E, 29.76 feet from a brass cap, stamped "1939", found for the Northwest corner of Section 36;

Thence S 85°35'12" E, 442.29 feet, to Engr. Sta. 4+42.29, a P.I. of 14°04'37" right;

Thence S 71°30′35″ E, 96.79 feet, to Engr. Sta. 5+39.08, a P.I. of 15°47′02″ left;

Thence S 87'17'37" E, 314.92 feet, the End of Survey, a point in the Northwest quarter of Section 36, which bears, S 86'10'54" W, 1,814.31 feet from a brass cap, stamped "1939", found for the North quarter corner of Section 36.

Said strip of land contains 0.392 acres, more or less, and is allocated by forties as follows:

NW 1/4 NW 1/4

51.758 Rods

0.392 Acres

REVISION DATE

JOB NO.: LS1705312 DWG. NO.: 7-1705312



SCALE: 1" = 1000' DATE: 5-23-17 SURVEYED BY: ML/JL DRAWN BY: KAKN APPROVED BY: RMH SHEET: 7 OF 7

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Engineering Drawings

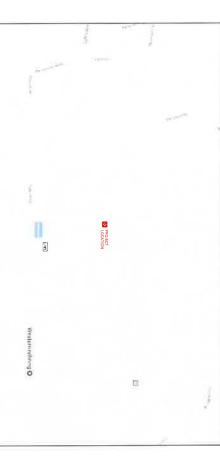
MEWBORNE OIL COMPANY

BEBOP FRAC PONDS

Section 36 - Township 25 South, Range 31 East, - Eddy County, New Mexico NMPM







Index to Drawings

Description

Cover Sheet
 Project Location Plan
 Site Plan
 Site Rep-Staking Plan
 Cross Sections
 Cross Sections
 Cross Sections
 Sump Plans and Details
 Miscellaneous Details
 Miscellaneous Details

Contacts Mewborne Oil Company - Tyler Tupman

Envirolech Engineering - Jimmy Stallings 580-234-8780 (Design Engineer)

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Bebop Frac Ponds Section 36-Township 25 South, Range 31 East N.M.A.M. - Eddy County, New Mexico

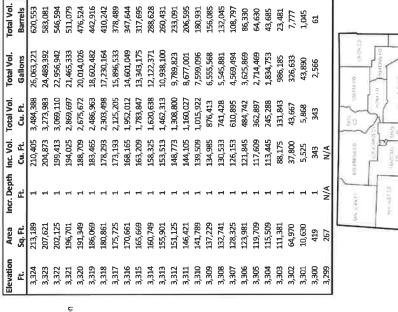
LOCATION PLAN

1 Stanty 1 1232 03 2 OF 9

STAGE STORAGE TABLE EAST

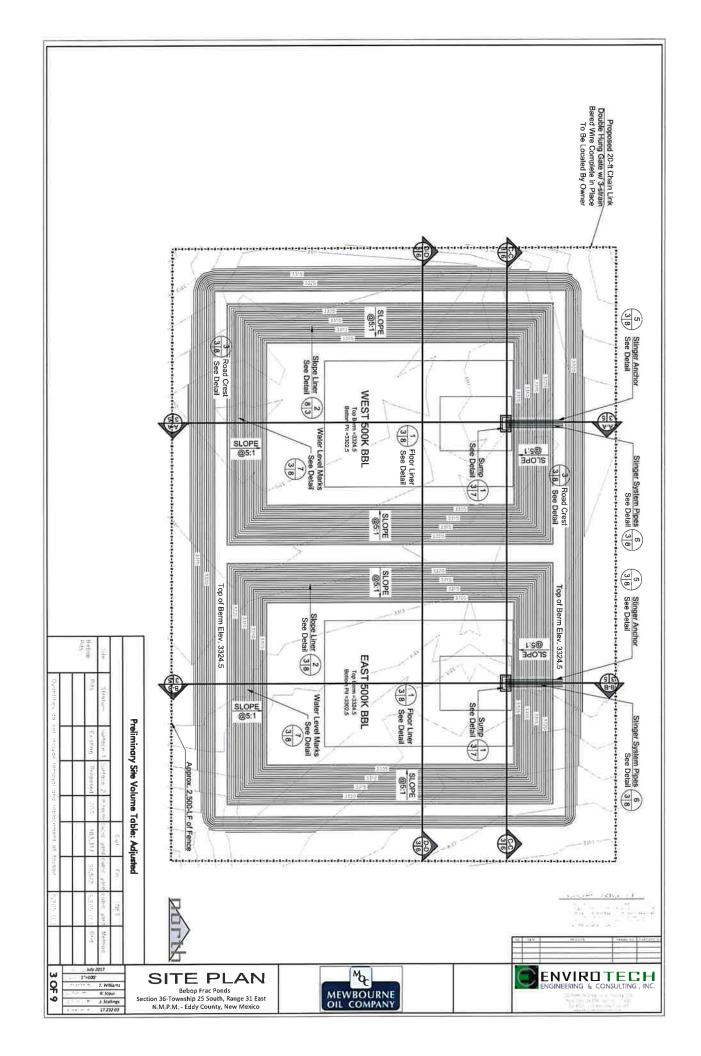
STAGE STORAGE TABLE WEST

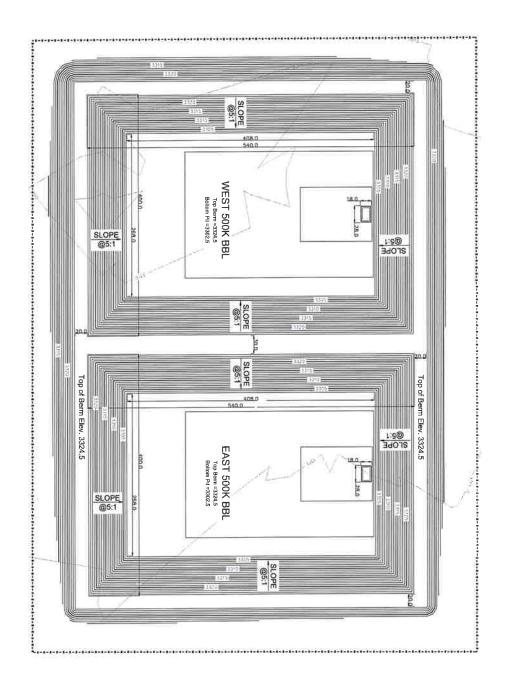
	Elevation	Area	Incr. Depth Inc. Vol.	inc. Vol.	Total Vol.	Total Vol.
	£	Sq. Ft.	F.	Cu. Ft.	Cu. Ft.	Gallons
	3,324	213,189	1	210,405	3,484,388	26,063,221
	3,323	207,621	1	204,873	3,273,983	24,489,392
	3,322	202,125	н	199,413	3,069,110	22,956,942
Freeboard Elevation	3,321	196,701	Ħ	194,025	2,869,697	21,465,333
	3,320	191,349	1	188,709	2,675,672	20,014,026
	3,319	186,069	1	183,465	2,486,963	18,602,482
	3,318	180,861	1	178,293	2,303,498	17,230,164
	3,317	175,725	1	173,193	2,125,205	15,896,533
	3,316	170,661	7	168,165	1,952,012	14,601,049
	3,315	165,669	1	163,209	1,783,847	13,343,175
	3,314	160,749	1	158,325	1,620,638	12,122,371
	3,313	155,901	7	153,513	1,462,313	10,938,100
	3,312	151,125	1	148,773	1,308,800	9,789,823
	3,311	146,421	п	144,105	1,160,027	8,677,001
	3,310	141,789	1	139,509	1,015,922	7,599,096
	3,309	137,229	н	134,985	876,413	6,555,568
	3,308	132,741	1	130,533	741,428	5,545,881
	3,307	128,325	П	126,153	610,895	4,569,494
	3,306	123,981	1	121,845	484,742	3,625,869
	3,305	119,709	7	117,609	362,897	2,714,469
	3,304	115,509	1	113,445	245,288	1,834,753
	3,303	111,381	П	88,175	131,843	986,185
Sump	3,302	64,970	1	37,800	43,667	326,633
	3,301	10,630	П	5,525	5,868	43,890
	3,300	419	н	343	343	2,566
	3,299	267	N/A	N/A		





					Freebos																			S			
Vol.	sis	553	781	294	970	524	316	242	489	48	262	228	431	160	292	331	185	55	797	- OE	- DE	83	81		5	_	٦
Total Vol.	Barrels	620,553	583,081	546,594	511,079	476,524	442,916	410,242	378,489	347,644	317,695	288,628	260,431	233,091	206,595	180,931	156,085	132,045	108,797	86,330	64,630	43,685	23,481	7,777	1,045	61	
Total Vol.	Gallons	26,063,221	24,489,392	22,956,942	21,465,333	20,014,026	18,602,482	17,230,164	15,896,533	14,601,049	13,343,175	12,122,371	10,938,100	9,789,823	8,677,001	7,599,096	6,555,568	5,545,881	4,569,494	3,625,869	2,714,469	1,834,753	986,185	326,633	43,890	2,566	
Total Vol.	Cu. Pt.	3,484,388	3,273,983	3,069,110	2,869,697	2,675,672	2,486,963	2,303,498	2,125,205	1,952,012	1,783,847	1,620,638	1,462,313	1,308,800	1,160,027	1,015,922	876,413	741,428	610,895	484,742	362,897	245,288	131,843	43,667	5,868	343	
Inc. Vol.	Cu. Fr.	210,405	204,873	199,413	194,025	188,709	183,465	178,293	173,193	168,165	163,209	158,325	153,513	148,773	144,105	139,509	134,985	130,533	126,153	121,845	117,609	113,445	88,175	37,800	5,525	343	Ν/A
Incr. Depth Inc. Vol. Total Vol.	£	1	1	П	1	1	1	1	1	1	1	1	1	1	1	F	1	П	⊣	н	1	1	1	-	1	1	N/A
Area	Sq. Ft.	213,189	207,621	202,125	196,701	191,349	186,069	180,861	175,725	170,661	165,669	160,749	155,901	151,125	146,421	141,789	137,229	132,741	128,325	123,981	119,709	115,509	111,381	64,970	10,630	419	267
Elevation	놴	3,324	3,323	3,322	3,321	3,320	3,319	3,318	3,317	3,316	3,315	3,314	3,313	3,312	3,311	3,310	3,309	3,308	3,307	3,306	3,305	3,304	3,303	3,302	3,301	3,300	3,299







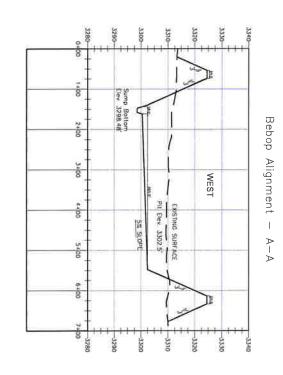
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SITE REP-STAKING
Bebop Frac Ponds
Section 36-Township 25 South, Range 31 East
N,M,P.M., - Eddy County, New Mexico

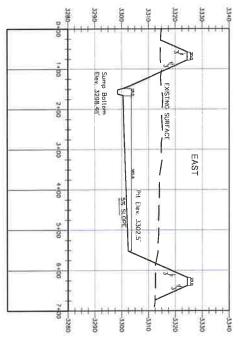








Elevation



Elevation

Bebop Alignment — B—B

CONVEIGHT

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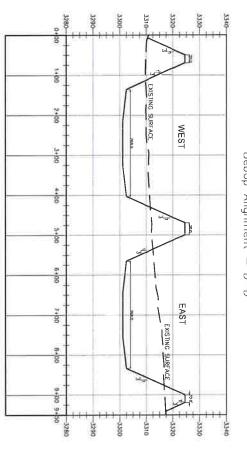
CROSS SECTIONS

Bebop Frac Ponds
Section 36-Township 25 South, Range 31 East
N.M.P.M. - Eddy County, New Mexico

East o







Bebop Alignment \mathbf{I} D-D

EXISTING SURFACE -3280 -3290

Elevation

Elevation

Bebop

Alignment

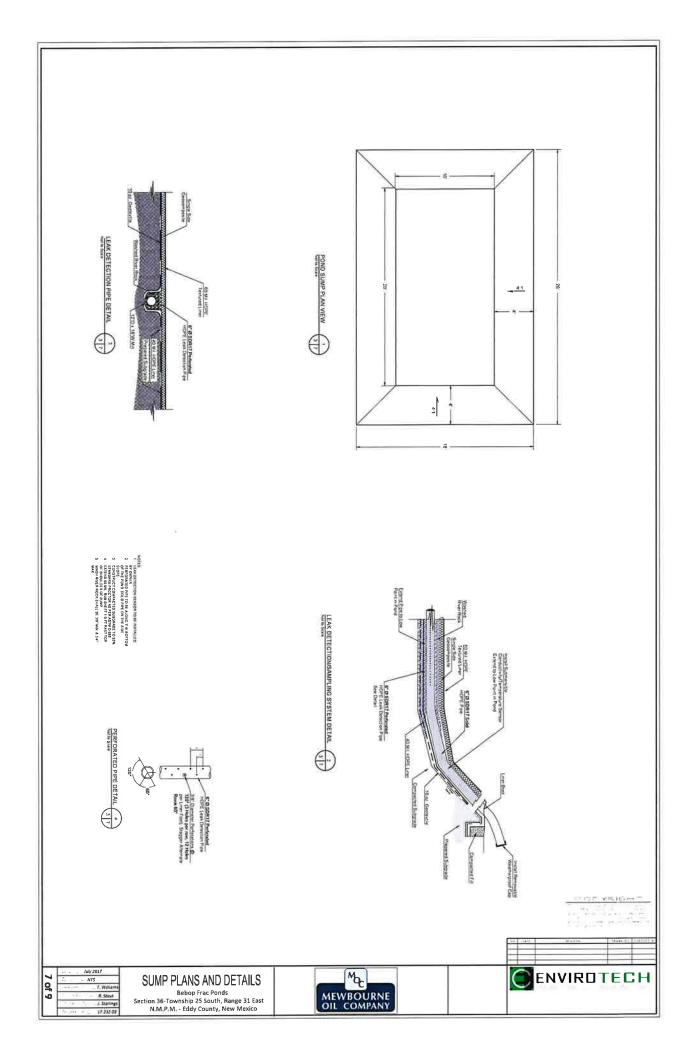
C-C

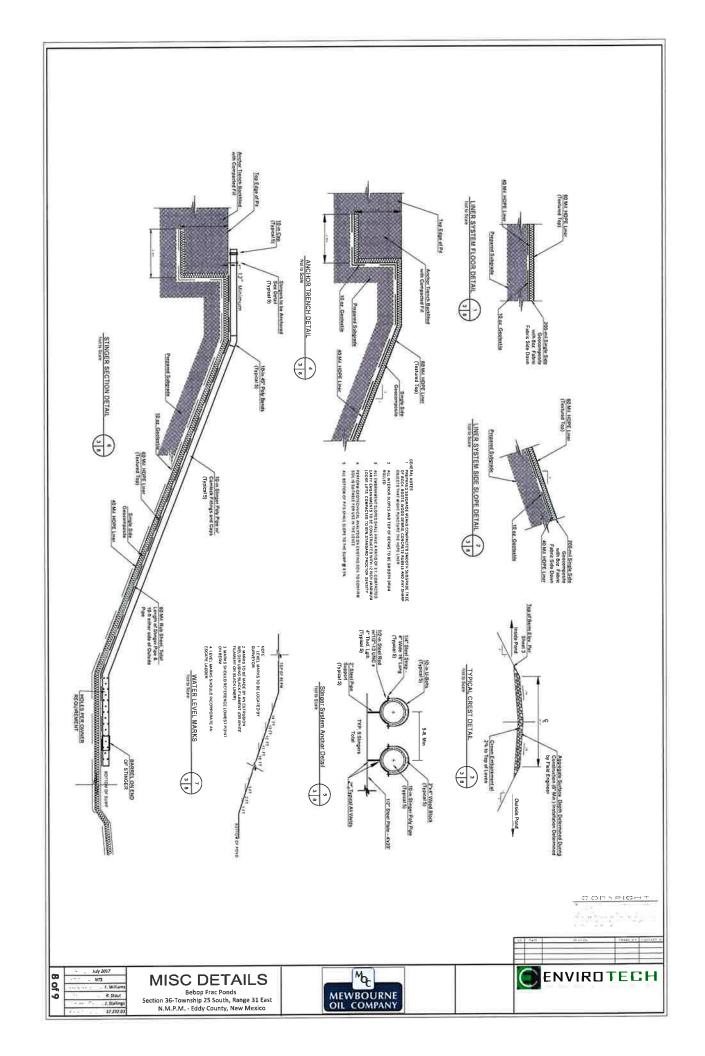
ENVIROTECH ENGINEERING & CONSULTING, INC.

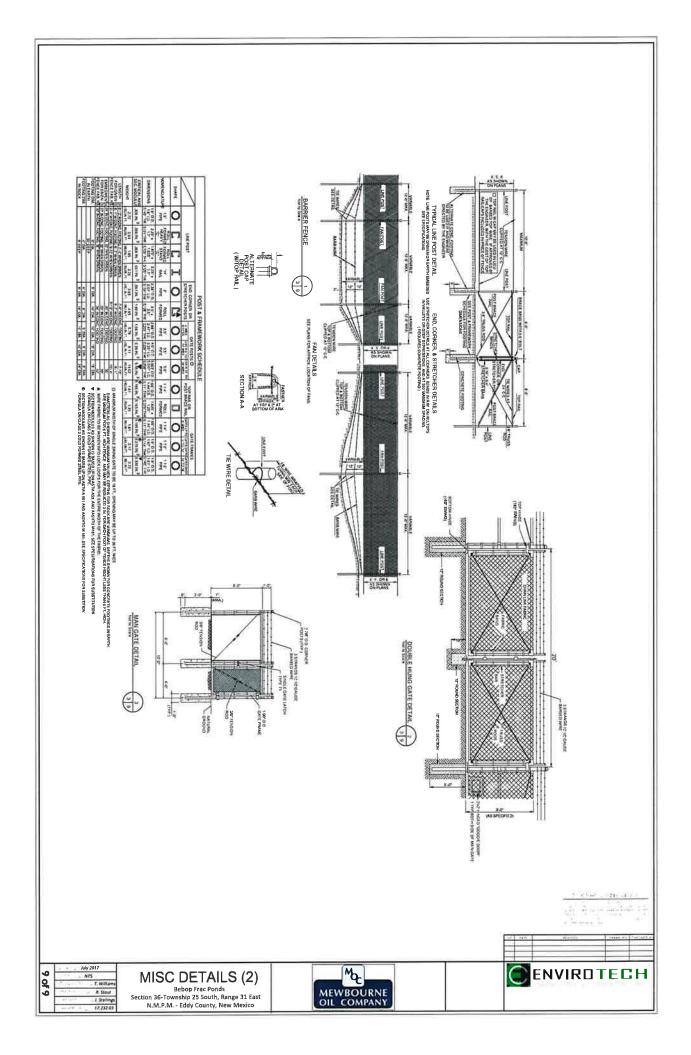
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Material Specs



Sales Office: Engineered Synthetic Products, Inc. Phone (770) 564-1857 Fax (770) 564-1818 www.espgeosynthetics.com

Geotextile Product Description Sheet

SKAPS Mustang-10 Nonwoven Geotextile

SKAPS Mustang-10 is a needle-punched nonwoven geotextile made of 100% polypropylene staple fibers, which are formed into a random network for dimensional stability. SKAPS Mustang-10 resists ultraviolet deterioration, rotting, biological degradation, naturally encountered basics and acids. Polypropylene is stable within a pH range of 2 to 13. SKAPS Mustang-10 conforms to the physical property values listed below:

PROPERTY	TEST METHOD	UNIT	M.A.R.V. (Minimum Average Roll Value)			
Grab Tensile	ASTM D 4632	lbs	225			
Grab Elongation	ASTM D 4632	%	50			
Trapezoid Tear Strength	ASTM D 4533	ibs	90			
CBR Puncture Resistance	ASTM D 6241	lbs	600			
Permittivity*	ASTM D 4491	sec ⁻¹	1.26			
Flow Rate*	ASTM D 4491	gpm/ft²	100			
AOS*	ASTM D 4751	US Sieve (mm)	80 (.180)			
UV Resistance	ASTM D 4355	%/hrs	70/500			

^{*} At the time of manufacturing. Handling, storage, and shipping may change these properties.

PACKAGING				
Roll Dimensions (W x L) - ft	15 x 1200			
Square Yards Per Roll	2000			
Estimated Roll Weight - lbs	1100			

This information is provided for reference purposes only and is not intended as a warranty or guarantee. SKAPS assumes no liability in connection with the use of this information.

SKAPS Industries, 316 S. Holland Dr., Pendergrass, GA 30567, Phone (706) 693-3440, Fax (706) 693-3450, Email: info@skaps.com

Made in U.S.A.

SOLMAX

TECHNICAL DATA SHEET

Premium HD Series, 40 mils

Black, Smooth

2801 Boul, Marie-Victorin Varennes, Quebec Canada J3X 1P7 Tel: (450) 929-1234 Sales: (450) 929-2544 Toll free in North America:1 800-571 3904 www.Solmax.com www.solmax.com

PROPERTY	TEST METHO	FREQUENCY(E)	UNIT Imperial	1001375
SPECIFICATIONS	Section 1			ALL THE PERSON
Thickness (min. avg.)	ASTM D-5199	Every roll	mils	40.0
Thickness (min.)	ASTM D-5199	Every roll	mils	36.0
Melt Index - 190/2.16 (max.)	ASTM D-1238	1/Batch	g/10 min	1.0
Sheet Density (8)	ASTM D-792	Every 10 rolls	g/cc	≥ 0.94
Carbon Black Content (9)	ASTM D-4218	Every 2 rolls	%	2.0 - 3.0
Carbon Black Dispersion	ASTM D-5596	Every 10 rolls	Category	Cat. 1 & Cat. 2
OIT - standard (avg.)	ASTM D-3895	Per formulation	min	160
HPOIT - High Pressure (avg)	ASTM D-5885	Per formulation	min	800
Tensile Properties (min. avg) (2)	ASTM D-6693	Every 2 rolls		
Strength at Yield			ррі	84
Elongation at Yield			%	13
Strength at Break			ppi	152
Elongation at Break			%	750
Tear Resistance (min. avg.)	ASTM D-1004	Every 5 rolls	lbf	28
Puncture Resistance (min. avg.)	ASTM D-4833	Every 5 rolls	lbf	85
Dimensional Stability	ASTM D-1204	Certified	%	± 2
Stress Crack Resistance (SP-NCTL) (avg.)	ASTM D-5397	1/Batch	hr	1000
Multi-Axial Tensile (min. avg.)	ASTM D-5617	Per formulation	%	15
Oven Aging - % retained after 90 days	ASTM D-5721	Per formulation		
HP OIT (min. avg.)	ASTM D-5885		%	80
UV Res % retained after 1600 hr	GRI-GM-11	Per formulation		
HP-OIT (min. avg.)	ASTM D-5885		%	80
SUPPLY SPECIFICATIONS (Roll)	dimensions may vary ±1°	%)		
Roll Dimension - Width	*		ft	22.3
Rall Dimension - Length			ft	780
Area (Surface/Roll)			sf	17394

NOTES

- 1. Testing frequency based on standard roll dimension and one batch is approximately 180,000 lbs (or one relicar).

 2. Machine Direction (MD) and Cross Machine Direction (XMD or TD) average values should be on the basis of 5 specimens each direction.

 3. Correlation table is available for ASTM D792 vs ASTM D1505. Both methods give the same results.

 9. Correlation table is available for ASTM D1603 vs ASTM D4218, Both methods give the same results.

- * All values are nominal test results, except when specified as minimum or maximum.

 * The information contained herein is provided for reference purposes only and is not intended as a warranty of guarantee. Final determination of suitability for use contemplated is the sole responsability of the user. SOLMAX assumes no liability in connection with the use of this information.

Solmax is not a design professional and has not performed any design services to determine if Solmax's goods comply with any project plans or specifications, or with the application or use of Solmax's goods to any particular system, project, purpose, installation or specification.



SKAPS Industries 571 Industrial Parkway Commerce, GA 30529 (U.S.A.) Phone (706) 336-7000 Fax (706) 336-7007 e-mail: info@skaps.com

> SKAPS TRANSNET™ (TN) **HDPE GEONET 220**

SKAPS TRANSNET™ Geonet consists of SKAPS GeoNet made from HDPE resin.

Property	Test Method	Unit	Required Value	Qualifler
Geonet				
Thickness	ASTM D 5199	mil.	220±20	Range
Carbon Black	ASTM D 4218	%	2 to 3	Range
Tensile Strength	ASTM D 7179	lb/in	45	Minimum
Melt Flow	ASTM D 12383	g/10 mln.	1	Maximum
Density	ASTM D 1505	g/cm ³	0.94	Minimum
Transmissivity ¹	ASTM D 4716	m²/sec.	2x10 ⁻³	MARV ²

Notes:

- Transmissivity measured using water at $21 \pm 2^{\circ}$ C ($70 \pm 4^{\circ}$ F) with a gradient of 0.1 and a confining pressure of 10000 psf between stainless steel plates after 15 minutes. Values may vary between individual labs.

 MARV is statistically defined as mean minus two standard deviations and it is the value which is exceeded by 97.5% of all the
- test data.
- 3. Condition 190/2.16

This information is provided for reference purposes only and is not intended as a warranty or guarantee. SKAPS assumes no liability in connection with the use of this information.



TECHNICAL DATA SHEET

Premium HD Series, 60 mils

Conductive, Smooth

2801 Boul, Marie-Victorin Valennes, Quebec Canada J3X 1P7
Tel: (450) 979-1234 Sales: (450) 929-2544 Toll free in North America:1-800-571-3904 www.Solmax.com www.solmax.com

PROPERTY	TEST METHOD	FREQUENCY	UNIT Imperial	1001688
SPECIFICATIONS				
Thickness (min. avg.)	ASTM D-5199	Every roll	mils	60.0
Thickness (min.)	ASTM D-5199	Every roll	mils	54.0
Melt Index - 190/2.16 (max.)	ASTM D-1238	1/Batch	g/10 min	1.0
Sheet Density (8)	ASTM D-792	Every 10 rolls	g/cc	≥ 0.94
Carbon Black Content (9)	ASTM D-4218	Every 2 rolls	%	2.0 - 3.0
Carbon Black Dispersion	ASTM D-5596	Every 10 rolls	Category	Cat. 1 & Cat. 2
OiT - standard (avg.)(6)	ASTM D-3895	Per formulation	min	160
HPOIT - High Pressure (avg)(6)	ASTM D-5885	Per formulation	min	800
Tensile Properties (min. avg) (2)	ASTM D-6693	Every 2 rolls		
Strength at Yield			ppi	132
Elongation at Yield			%	13
Strength at Break			ppi	243
Elongation at Break			%	750
Tear Resistance (min. avg.)	ASTM D-1004	Every 5 rolls	lbf	42
Puncture Resistance (min. avg.)	ASTM D-4833	Every 5 rolls	lbf	125
Dimensional Stability	ASTM D-1204	Certified	%	± 2
Stress Crack Resistance (SP-NCTL) (avg.)	ASTM D-5397	1/Batch	hr	1000
Multi-Axial Tensile (min. avg.)	ASTM D-5617	Per formulation	%	15
Oven Aging - % retained after 90 days	ASTM D-5721	Per formulation		
HP OIT (min. avg.)	ASTM D-5885		%	80
UV Res % retained after 1600 hr	GRI-GM-11	Per formulation		
HP-OIT (min. avg.)	ASTM D-5885		%	80
Volume Resistivity (max.)	ASTM D-4496	Every 10 rolls	Ohm•m	10
SUPPLY SPECIFICATIONS (Roll	dimensions may vary ±1	(1)		Howald 198
Roll Dimension - Width	3		ft	22.0
Roll Dimension - Length	*		ft	520
Area (Surface/Roll)	347		sf	11440
Application (10)	(#)	*		Conductive

(Rev. 03 / 2016-12-14)

NOTES

- Testing frequency based on standard roll dimension and one batch is approximately 180,000 lbs (or one railcar).
 Machine Direction (MD) and Cross Machine Direction (XMD or TD) average values should be on the basis of 5 specimens each direction.
 Modified. Samples should be taken on the core layer only.
 Modified. Samples should be taken on the core layer only.
 Correlation table is available for ASTM D792 vs ASTM D1505. Both methods give the same results.
 Correlation table is available for ASTM D1603 vs ASTM D4218. Both methods give the same results.
 The conductive layer may cause the carbon black content results to be higher than 3%, specified on the data sheet.

- * All values are nominal test results, except when specified as minimum or maximum.

 * The information contained herein is provided for reference purposes only and is not intended as a warranty of guarantee. Final determination of suitability for use contemplated is the sole responsability of the user. SOLMAX assumes no liability in connection with the use of this information.

Solmax is not a design professional and has not performed any design services to determine if Solmax's goods comply with any project plans or specifications, or with the application or use of Solmax's goods to any particular system, project, purpose, installation or specification.

Avian Protection Device Specs

MEGABLASTER PRO (MEGA) SPECS

• Coverage: Up to 30 acres from single unit

Box dimensions: 32" x 24" x 5" / Shipping weight: 17 lbs
 Power Input: 12vDC (3 amps) via solar panel and battery

Sound Pressure: up to 125 decibels

Frequency: 2,000–10,000 Hz
Compliance: UL and CE listed
EPA Est. 075310-OR-001

 Included: Generating unit with two built-in high-output amplifiers, 20-speaker tower with audio cables, 40 watt solar panel, battery clips and all mounting hardware.

• Proudly made in the USA