

TEXAS BRINE COMPANY, LLC

4800 San Felipe
Houston, Texas 77056

Office: (713) 877-2700
Fax: (713) 877-2605

August 13, 2012

Mr. Joseph Ball, Director
Louisiana Department of Natural Resources
Office of Conservation
Injection and Mining Division
P.O. Box 94275
617 N. Third Street, 3rd Floor
Baton Rouge, Louisiana 70804-9275

Via Email
Return Receipt Requested

Re: Oxy Geismar # 3-A Observation Well
Class V Well Permit Application - Form UIC - 25
Napoleonville Field
Assumption Parish, Louisiana

OFFICE OF CONSERVATION
AUG 13 2012
INJECTION & MINING DIVISION

Dear Mr. Ball:

Please find enclosed the following:

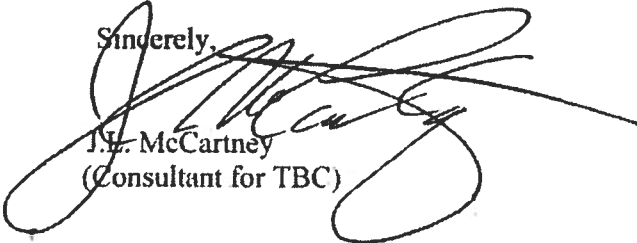
1. UIC-25 Form (2 pages)
2. Proposed Well Casing Schematic – Oxy Geismar # 3-A Observation well
3. Schematic Diagram of OG # 3-A proposed drilling plan to re-enter OG # 3 cavern
4. West – East Sonar Cross section of OG # 3 cavern dated 10-6-2007
5. OG # 3 sonar horizontal slice showing maximum diameter at cavern roof (3395')
6. Baker Hughes proposed cementing program

Please note that all of the above is proposed at this time and subject to change if required by field conditions.

A certified location plat will be sent as soon as prepared.
Location preparation work will begin Monday, August 13th.
The rig is on standby and scheduled to move in on Thursday August 16th.
The well should spud no later than Friday, August 17th.

Should you have questions or require additional information, please feel free to call (713-877-2684) or email me at jmccartney@unitedbrine.com.

Sincerely,


J.W. McCartney
(Consultant for TBC)



LOUISIANA DEPARTMENT OF NATURAL RESOURCES
OFFICE OF CONSERVATION
INJECTION & MINING DIVISION

UIC-25

CLASS-V WELL PERMIT APPLICATION

1. APPLICATION TYPE: (Check One)		2. WELL OWNERSHIP (Check One)	
<input checked="" type="checkbox"/> DRILL AND COMPLETE NEW CLASS-V WELL <input type="checkbox"/> CONVERT AN EXISTING WELL TO CLASS-V <input type="checkbox"/> PERMIT EXISTING CLASS-V WELL <input type="checkbox"/> OTHER (SPECIFY):		<input type="checkbox"/> PRIVATE RESIDENCE <input checked="" type="checkbox"/> COMMERCIAL RESIDENCE OR BUSINESS <input type="checkbox"/> GOVERNMENT <input type="checkbox"/> OTHER (SPECIFY)	
3. IDENTIFY WELL USE (Aquifer Remediation, A/C Heat Pump Return Flow, Process Waste, Subsidence Control, Special Drainage, Salt Water Intrusion Barrier, etc. See LAC 43:XVII.103.C.5 for additional well uses) OBSERVATION			
4. OWNER/OPERATOR NAME TEXAS BRINE COMPANY LLC			5. OC OPERATOR CODE T-149
6. OWNER/OPERATOR MAILING ADDRESS 4800 SAN FELIPE		7. CITY, STATE, ZIP CODE HOUSTON, TEXAS 77056	
8. PHYSICAL ADDRESS WHERE WELL LOCATED IF DIFFERENT FROM ITEM NO. 6 SAME		9. CITY, STATE, ZIP CODE SAME	
10. TELEPHONE NO 713-877-2700	11. FAX NO 713-877-2605	12. E-MAIL ADDRESS jmccartney@unitedbrwe.com	
13. WELL NAME OXY GEISMAR		14. WELL NO 3-A	15. WELL SERIAL NO (Well Conversions Only) N/A
16. FIELD NAME (if known) NAPOLEONVILLE		17. FIELD CODE (if known) 7010	
18. PARISH NAME ASSUMPTION		19. SECTION 40	20. TOWNSHIP 12S
		21. RANGE 13E	
22. LOUISIANA COORDINATE ZONE (Check One)		For Item Numbers 23 Through 28, Give Coordinates in Louisiana Coordinate System 1927 and 1983	
<input type="checkbox"/> NORTH ZONE <input checked="" type="checkbox"/> SOUTH ZONE			
23. LATITUDE (NORTH) NAD 1927 487922.77		24. LONGITUDE (WEST) NAD 1927 2061364.71 EAST	25. LOUISIANA LAMBERT (X-Y) COORDINATES (NAD 1927) x: N30° 00' 29.82" y: W91° 08' 22.04"
26. LATITUDE (NORTH) NAD 1983 548627.2		27. LONGITUDE (WEST) NAD 1983 3342163.42	28. LOUISIANA LAMBERT (X-Y) COORDINATES (NAD 1983) x: N30° 00' 30.54" y: W91° 08' 22.41"
29. LIST PERMITS, LICENSES, OR APPROVALS THE APPLICANT HAS RECEIVED OR APPLIED FOR WHICH SPECIFICALLY AFFECT THE APPLICANT'S LEGAL OR TECHNICAL ABILITY TO CARRY OUT THE PROPOSED ACTIVITY. INCLUDE IDENTIFICATION NUMBER OF APPLICATIONS OR, IF ISSUED, THE IDENTIFICATION NUMBER OF THE PERMIT, LICENSE, OR OTHER APPROVALS.			
Regulatory Program or Agency		Permits, Licenses, Construction, Project Approval Identification	
N/A		N/A	

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AUG 13 2012
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30. WELL CASING / CEMENT DATA

HOLE SIZE (inches)	CASING SIZE (OD - Inches)	CASING WEIGHT (lb/ft)	CASING GRADE	CASING/LINER SETTING DEPTHS		SACKS CEMENT	TYPE CEMENT	CEMENT TOP (feet)
				TOP (feet)	BOTTOM (feet)			
DRIVEN	20	202	X-52	0	250	DRIVEN		
22	16	97	J-55	0	600	790	CLASS A	0
16	10 3/4	40.5	J-55	0	1000	1035	CLASS H	0
13 3/8	7	26	J-55	0	3000	1985	CLASS H	0

31. BASE OF USDW 500'	32. WELL TOTAL DEPTH 3400 +/-	33. WELL PLUGBACK DEPTH N/A	34. TUBING SIZE & DEPTH	35. PACKER SIZE & DEPTH N/A
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36. INJECTION ZONE DEPTHS Top: N/A Bottom:		37. COMPLETION/PERFORATION DEPTHS Top: N/A Bottom:		38. WELL COMPLETION (Check One) <input checked="" type="checkbox"/> OPEN HOLE <input type="checkbox"/> PERFORATIONS <input type="checkbox"/> SCREEN	
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39. INJECTION FORMATION NAME NAPLÉONVILLE SALT DOME	40. LINE PRESSURE INTO WELL (psi) N/A	41. INJECTED FLUID DENSITY N/A	42. INJECTION RATE (gpm) Normal: N/A Maximum:
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43. DESCRIBE IN SUFFICIENT DETAIL THE SOURCE, TYPE, CHARACTERISTICS, ETC. OF THE INJECTION FLUID

N/A

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44. Is the Well Located on Indian Lands or Other Lands Owned by or under the Jurisdiction or Protection of the Federal Government? YES NO

45. Is the Well Located on State Water Bottoms or Other Lands Owned by or under the Jurisdiction or Protection of the State of Louisiana? YES NO


46. AGENT OR CONTACT AUTHORIZED TO ACT ON BEHALF OF THE APPLICANT DURING THE PROCESSING OF THIS APPLICATION. IF WATER WELL CONTRACTOR, PROVIDE WATER WELL CONTRACTOR LICENSE NUMBER.

NAME: TEXAS BRINE COMPANY LLC
 MAILING ADDRESS: 4800 SAN FELIPE
 CITY, STATE, ZIP CODE: HOUSTON, TEXAS 77056
 TELEPHONE NUMBER: 713-877-2700 FAX NUMBER: 713-877-2605
 E-MAIL ADDRESS: jmcartney@unitedbrine.com
 WATER WELL CONTRACTOR'S LICENSE NO:

47. CERTIFICATION BY WELL OWNER/OPERATOR

I certify that as the owner/operator of the injection well, the person identified in Item No. 46 above is authorized to act on my behalf during the processing of this application, to submit additional information as requested, and to give oral statements in support of this application. I will grant an authorized agent of the Office of Conservation entry onto the property to inspect the injection well and related appurtenances as per LSA-R.S. 30:4. I agree to operate the well in accordance with Office of Conservation guidelines. I further certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment or both (LSA-R.S. 30:17).

Print Name of Well Owner/Operator: TEXAS BRINE COMPANY LLC Print Title of Company or Government Official (as applicable): J.L. McCARTNEY

Signature of Well Owner/Operator:  Date: 8-11-12

WEST

TEXAS BRINE COMPANY, LLC
OXYGEISMAR # 3-A
ASSUMPTION, PH. LA
SECT 40, T12S 13E

SHEET NO. EAST

OXYGEISMAR # 3

OXYGEISMAR # 3-A

TITLE OF PROJ. OR STUDY

SUBJECT

PLAN

PROJ. OR STUDY NO.

COMPUTER

DATE

0 1 2 3 4 REFERENCE 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 G/L 28 29 30 31

REFERENCE
SOCON SONAR
10-6-07

20", 202# X-52
DRIVEN c 250' +/-

16", 97# J-55
c 600' (22" hole)
Cemented to surface

Top Caprock
c 315' +/-

Top Salt
700' +/-

10 3/4" c 1000'
40.5# J-55
16" hole
Cemented to surface

PROPOSED RE-ENTRY WELL PLAN

OFFICE OF CONSERVATION

AUG 13 2012

INJECTION & MINING DIVISION

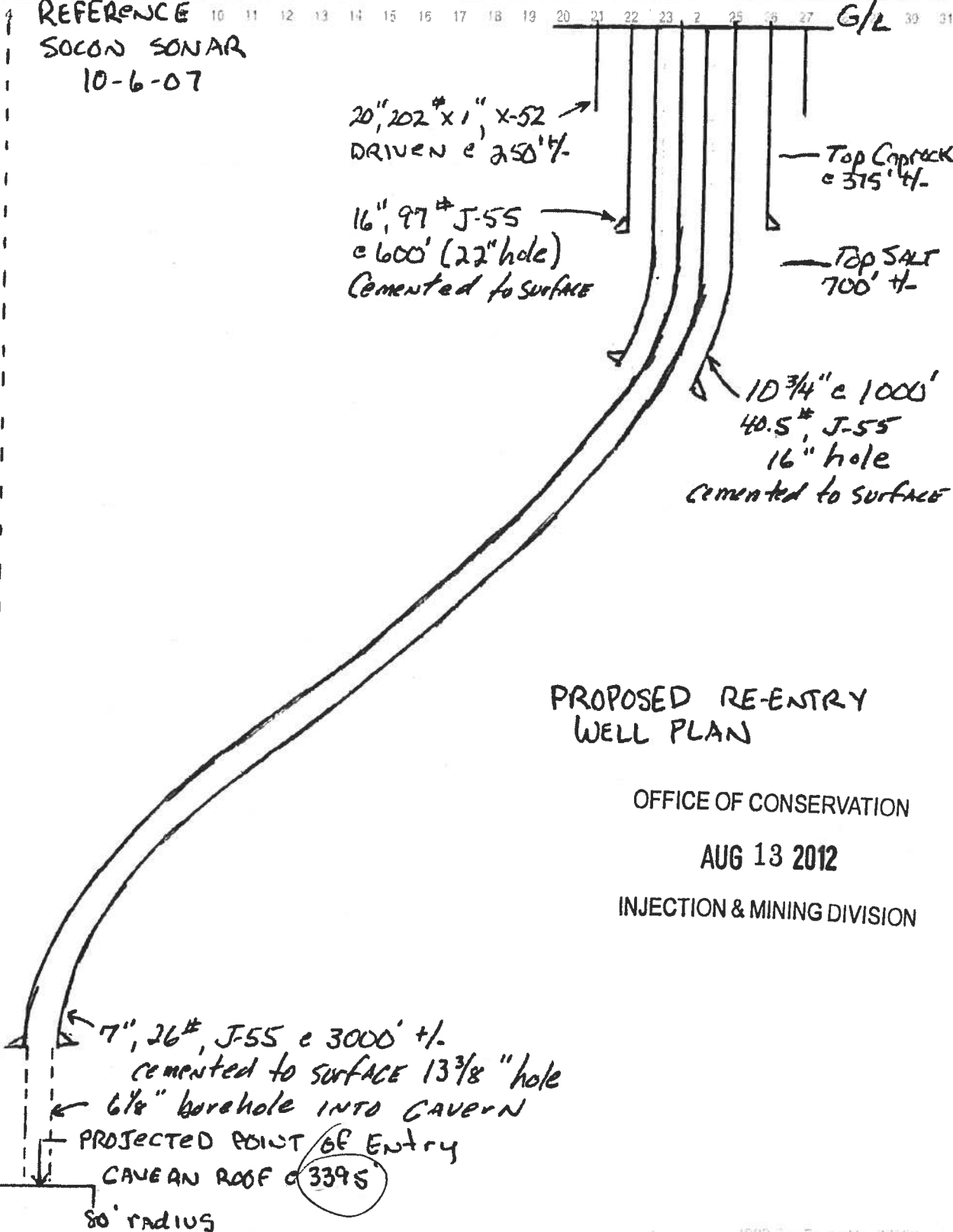
7", 26# J-55 c 3000' +/-
Cemented to surface 1 3/8" hole

6 1/8" borehole INTO CAVERN

PROJECTED POINT OF ENTRY

CAVERN ROOF c 3395

80' radius

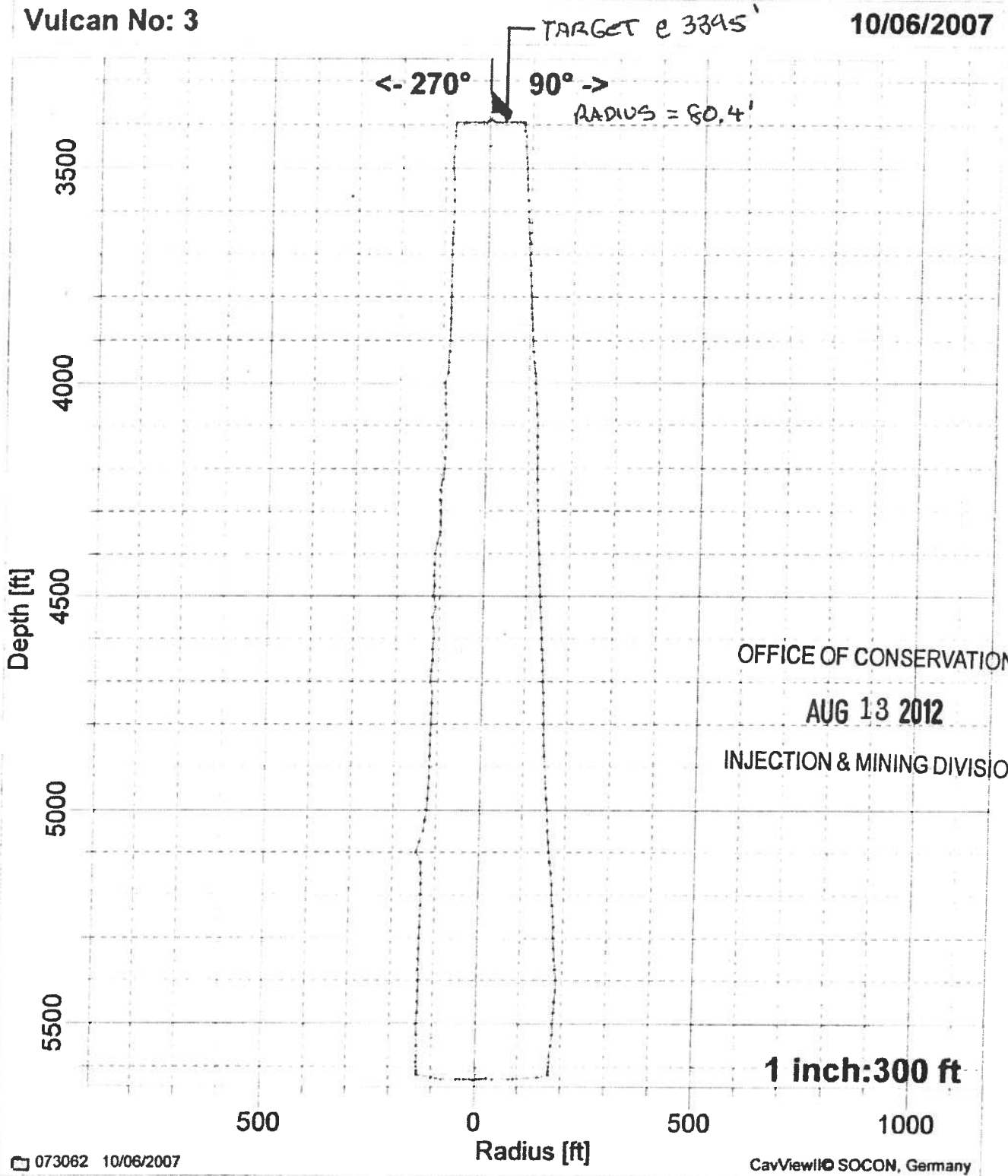




SOCON Sonar Well Services, Inc.

Vulcan No: 3

10/06/2007



(10/06/2007)	13 3/8" : 2546.0 ft	11 3/4" : 3373.0 ft
Tilting position		



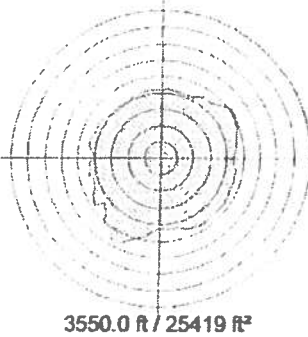
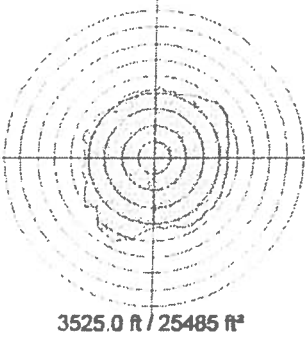
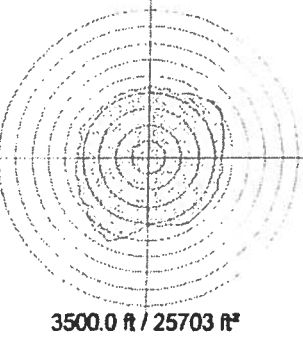
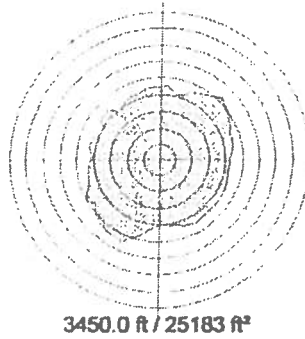
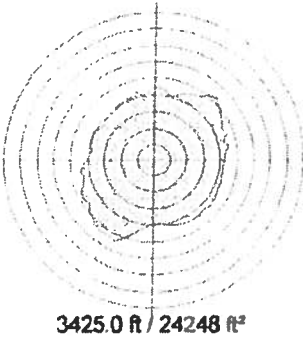
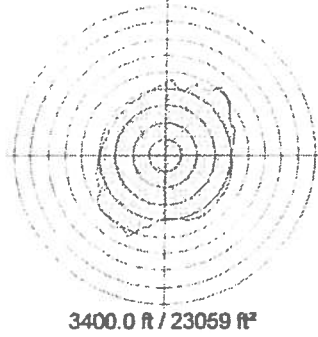
SOCON Sonar Well Services, Inc.

Horizontal slices 13 - 24

Cavity: Vulcan No: 3 Report number: 073062 Date: 10/06/2007

APPROXIMATE CAVERN ENTRY POINT

TARGET
CAVERN
ROOF
MAX RAD.



The distance between 2 circles equals 20 ft

OFFICE OF CONSERVATION

AUG 13 2012

INJECTION & MINING DIVISION

Operator Name: Texas Brine Co
 Well Name: Oxy Geismar #3A
 Job Description: 16" Surface Casing @ 600'
 Date: August 11, 2012



Proposal No: 786650283A

WELL DATA

16" CASING

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
18.730 CASING	250	250
22.000 HOLE	600	600

SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
16.000	14.850	97	600	600

Float/Landing Collar set @ 560 ft
 Mud Density 9.00 ppg
 Mud Type Water Based
 Est. Static Temp. 86 ° F
 Est. Circ. Temp. 80 ° F

VOLUME CALCULATIONS

250 ft x 0.5171 cf/ft with 0 % excess = 129.3 cf
 350 ft x 1.2435 cf/ft with 100 % excess = 870.5 cf
 40 ft x 1.2028 cf/ft with 0 % excess = 48.1 cf (inside pipe)
TOTAL SLURRY VOLUME = 1047.9 cf
 = 187 bbls

OFFICE OF CONSERVATION

AUG 13 2012

INJECTION & MINING DIVISION

Operator Name: Texas Brine Co
 Well Name: Oxy Geismar #3A
 Job Description: 16" Surface Casing @ 600'
 Date: August 11, 2012



Proposal No: 786650283A

FLUID SPECIFICATIONS

Spacer				60.0 bbls Brine Water @ 10 ppg
FLUID	VOLUME CU-FT	VOLUME FACTOR		AMOUNT AND TYPE OF CEMENT
Slurry	1048	/ 1.53		= 690 sacks Class A Cement + 0.2% bwoc FP-11 + 1% bwoc Calcium Chloride + 52.3% Fresh Water
Displacement				120.0 bbls Water Based Mud @ 9 ppg
Top-Out Slurry	120	/ 1.2		= 100 sacks Class A Cement + 2% bwoc Calcium Chloride + 0.01 gps FP-6L + 46.5% Fresh Water

CEMENT PROPERTIES

	SLURRY NO.1	SLURRY NO.2
Slurry Weight (ppg)	15.60	15.60
Slurry Yield (cf/sack)	1.53	1.20
Amount of Mix Water (gps)	5.90	5.25

All slurry properties represented above are estimates and will be confirmed by regional lab testing prior to the cementing service

WOC

Top of Cap @ 377'

OFFICE OF CONSERVATION
 AUG 13 2012
 INJECTION & MINING DIVISION

Operator Name: Texas Brine Co
 Well Name: Oxy Geismar #3A
 Job Description: 10-3/4" Intermediate Casing @ 1000'
 Date: August 11, 2012



Proposal No: 786650283A

WELL DATA

10. 3/4 " CASING

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
14.850 CASING	600	600
17.500 HOLE	1,000	1,000

SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
10.750	10.050	40.5	1,000	1,000

Float/Landing Collar set @ 960 ft
 Mud Density 10.00 ppg
 Mud Type Brine Based
 Est. Static Temp. 90 ° F
 Est. Circ. Temp. 80 ° F

VOLUME CALCULATIONS

600 ft x 0.5725 cf/ft with 0 % excess = 343.5 cf
 400 ft x 1.0400 cf/ft with 100 % excess = 832.0 cf
 40 ft x 0.5509 cf/ft with 0 % excess = 22.0 cf (inside pipe)
TOTAL SLURRY VOLUME = 1197.5 cf
 = 213 bbls

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 AUG 13 2012
 INJECTION & MINING DIVISION

Operator Name: Texas Brine Co
 Well Name: Oxy Geismar #3A
 Job Description: 10-3/4" Intermediate Casing @ 1000'
 Date: August 11, 2012



Proposal No: 786850283A

FLUID SPECIFICATIONS

Spacer				50.0 bbls Brine @ 10 ppg
FLUID	VOLUME CU-FT	VOLUME FACTOR		AMOUNT AND TYPE OF CEMENT
Slurry	1198	/ 1.28		= 935 sacks Class H Cement + 0.2% bwoc FP-11 + 37.2% bwow Sodium Chloride + 46.8% Fresh Water
Displacement				94.2 bbls Brine @ 10 ppg
Top-Out Slurry	108	/ 1.08		= 100 sacks Class H Cement + 2% bwoc Calcium Chloride + 0.01 gps FP-6L + 38.6% Fresh Water

CEMENT PROPERTIES

	SLURRY NO.1	SLURRY NO.2
Slurry Weight (ppg)	16.10	16.40
Slurry Yield (cf/sack)	1.28	1.08
Amount of Mix Water (gps)	5.28	4.35
Amount of Mix Fluid (gps)	5.28	4.36

All slurry properties represented above are estimates and will be confirmed by regional lab testing prior to the cementing service

WOC for min 72 hours to be confirmed by UCA strength

Top of salt @ 700'

OFFICE OF CONSERVATION
 AUG 13 2012
 INJECTION & MINING DIVISION

Operator Name: Texas Brine Co
 Well Name: Oxy Geismar #3A
 Job Description: 7" Long String @ 3000'
 Date: August 11, 2012



Proposal No: 786650283A

WELL DATA

7" CASING

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
10.050 CASING	1,000	1,000
13.375 HOLE	3,000	3,000

SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
7.000	6.276	26	3,000	3,000

Float/Landing Collar set @ 2,960 ft
 Mud Density 10.00 ppg
 Mud Type Brine Based
 Est. Static Temp. 110 ° F
 Est. Circ. Temp. 94 ° F

VOLUME CALCULATIONS

1,000 ft x 0.2836 cf/ft with 0 % excess = 283.6 cf
 2,000 ft x 0.7084 cf/ft with 50 % excess = 2125.3 cf
 40 ft x 0.2148 cf/ft with 0 % excess = 8.6 cf (inside pipe)
TOTAL SLURRY VOLUME = 2417.6 cf
 = 431 bbls

OFFICE OF CONSERVATION

AUG 13 2012

INJECTION & MINING DIVISION

Operator Name: Texas Brine Co
 Well Name: Oxy Geismar #3A
 Job Description: 7" Long String @ 3000'
 Date: August 11, 2012



Proposal No: 786650283A

FLUID SPECIFICATIONS

Spacer 30.0 bbls Brine @ 10 ppg

<u>FLUID</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>
Slurry	2418	/ 1.28	= 1885 sacks Class H Cement + 0.2% bwoc FP-11 + 37.2% bwow Sodium Chloride + 46.8% Fresh Water
Displacement			113.3 bbls Brine @ 10 ppg
Top-Out Slurry	106	/ 1.06	= 100 sacks Class H Cement + 0.01 gps FP-6L + 2% bwoc Calcium Chloride + 38.7% Fresh Water

CEMENT PROPERTIES

	<u>SLURRY NO.1</u>	<u>SLURRY NO.2</u>
Slurry Weight (ppg)	16.10	16.40
Slurry Yield (cf/sack)	1.28	1.06
Amount of Mix Water (gps)	5.28	4.36

All slurry properties represented above are estimates and will be confirmed by regional lab testing prior to the cementing service

WOC for min 72 hours to be confirmed by UCA strength

OFFICE OF CONSERVATION
 AUG 13 2012
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**Proposed Drilling Prognosis
Oxy geismar # 3-A Observation Well**

Step	Action
1	Prepare location
2	Move in Rig
3	Rig up rig and equipment
4	Conduct Initial Safety Orientation and Review of Drilling Prognosis with Rig Crew
5	Drive 20" x 1", X-52, 202# casing with speed shoe and DDS threads to 250' or Point of Refusal
6	Install Hydril, BOP and appropriate pressure equipment including gas buster on 20" drilling flange
7	Clean out 20" casing and pick up 12-1/4" bit and drill to approximately 600' in caprock or approximately 100' above Top of Salt
8	Run open hole logs
9	Open hole in stages to 22"
10	Run X-Y caliper log and calculate quantity of cement for cement job
11	Run 16", 97#, J-55, BTS threads to approximately 600' equipped with cementing shoe
12	Cement 16" casing to surface using projected cementing program attached to UIC-25
13	WOC approximately 12 hours
14	Test 16" casing per LADNR requirements
15	Drill out 16" shoe and 10' of formation with 12-1/4" bit and test formation per LADNR requirements
16	Switch fresh water drilling system over to saturated brine drilling system
17	Pick up directional drilling equipment and motor and begin to build appropriate drilling angle
18	Drill hole to approximately 1000' or 300' into Top of Salt
19	If loss circulation is encountered at Caprock/Salt interface (expected), drill dry to 1000' or 300' into Top of Salt
20	Run open hole logs
21	Open hole in stages to 16"
22	Run X-Y caliper log and calculate quantity of cement for cement job
23	Run 1000' of 10-3/4", 40.5#, J-55 casing
24	Cement 10-3/4" casing to surface using projected cementing program attached to UIC-25
25	WOC approximately 12 hours
26	Test 10-3/4" casing per LADNR requirements
27	Drill out 10-3/4" shoe and 10' of formation with 8-5/8" bit and test formation per LADNR requirements
28	Pick up directional drilling equipment and motor and continue to build appropriate drilling angle.
29	Drill to approximately 3000' planning to be vertical and immediately above Top of Cavern location at TD
30	Note: per 10-6-2007 sonar survey, top of cavern is at 3395'
31	Run open hole logs
32	Open hole to 13-3/8"
33	Run X-Y caliper log and calculate quantity of cement for cement job
34	Run 7", 26#, J-55 casing to 3000' equipped with cementing shoe
35	Cement 7" casing to surface using projected cementing program included with UIC - 25 application
36	WOC approximately 24 hours
37	Test 7" casing per LADNR requirements
38	Drill out 7" shoe and 10' of formation and test formation to LADNR requirements
39	Run Cement bond log on 7" final cemented casing
40	Pick up directional drilling equipment and motor and drill into top of cavern roof at approximately 3395'
41	Close hydril, BOP and other pressure control equipment
42	Rig down rig and move off location
43	Bleed off any brine pressure or accumulated gas from cavern
44	Conduct appropriate diagnostics as required