

BW - _____ 19_____

**GENERAL
CORRESPONDENCE**

YEAR(S):

2007 - Present

File Review

BW-19

Key Energy Services, Inc.

City of Carlsbad #1 Brine Station

H-36-22S-26E

API 30-015-21842

- Last permit renewal dated 3/7/08. Scheduled to expire 12/19/11. Reverse flow. Maximum injection pressure 213 psig. Annual formation testing required at 300 psig for 4 hours. Casing MIT once every 5 years at 300 psi for 30 minutes with first once scheduled for 2008. Renewal application calls for anticipated brine production rate of 650 bbls/day.
- Freshwater obtained from City of Carlsbad.
- Facility located within the *Otis, New Mexico (1985)* USGS 7.5 minute quadrangle.
- Twice yearly, wastes are transported to Key Energy BKE SWD located on Roberson Road for disposal.
- According to OSE data, there are no water wells within ¼ mile. According to wells within one mile, DTW in the area ranges from 60 to 149 ft bgs.
- Trucker's Water Company original owner, sell to Unichem in 1981. Original discharge plan approved 12/18/82. Unichem sold out facility in March 1993. Rowland Trucking of Hobbs applied for renewal permit in 1996. Rowland operated thru at least April 1998.
- Landowner: Weldon Stafford Revocable Trust, 1319 Doepp Drive, Carlsbad 88220 phone 885-6000. Claiborne Power and Will Brantley both of Merland, Inc. are landowners in area of water station.
- 200 bbl release reported in May 2000 when unknown person opened valves.
- City has supply well within one mile.
- Releases suspected as far back as 1985

Missing production and injection data

4th quarter of 1981 thru 4th quarter of 1986
1st and 4th quarters of 1989
1st quarter of 1992 thru 4th quarter of 1993
4th quarter of 1998
3rd and 4th quarters of 1999
No injection data for 2nd and 3rd quarters of 2001
1st quarter of 2004 thru plugging of well

36-22S-26E

30-015-20829	Airport Grace #1	Bold Energy LP	logs exist
30-015-10908	Salty Bill SWD #1	Corinne Grace	log exists
30-015-20573	Grace Carlsbad #1	Oxy	logs exist
30-015-21842	City of Carlsbad #1	Key	no log

31-22S-27E

30-015-20288	Allen #1	Sabre Operating	logs exist
30-015-32795	Allen COM #2	Chi Operating	logs exist
30-015-33788	Allen #3	Chi Operating	logs exist
30-015-20368	Little Jewel COM #1	Chaparral Energy	logs exist

30-22S-27E

30-015-26367	Pre Ongard		no log
30-015-28485	Rodgers #1	Oxy	no log
30-015-20401	Spencer A #1	Chi Operating	logs exist
30-015-20430	Merland B COM #1	Oxy	logs exist
30-015-29007	Hagerman #1	Chi Operating	logs exist
30-015-33181	Merland #2	Chi Operating	logs exist

30-015-36231	Arthur #1	Chi Operating	no log
25-22S-26E			
30-015-00372	Pre Ongard		no log
30-015-31597	City of Carlsbad COM #2	Marbob Energy	logs exist
30-015-20325	City of Carlsbad COM #1	Oxy	logs exist
30-015-20452	Gopogo #1	Oxy	logs exist
1-23S-26E			
30-015-00373	Pre Ongard		no log
30-015-32288	Gulf Federal Com #3	Cimarex Energy	logs exist
30-015-20246	Collatt Estate Com #1	Merit Energy	logs exist
30-015-20286	Gulf Federal #1	Cimarex Energy	logs exist
30-015-32480	Collatt #2	Merit Energy	logs exist
6-23S-27E			
30-015-20087	Pre Ongard		logs exist
30-015-20545	Gulf Federal COM #2	Cimarex Energy	logs exist
30-015-33292	Joell 6 #2	Devon Energy	logs exist
30-015-20335	Joel #1	Chaparral	logs exist
30-015-32560	Gulf Federal COM #4	Cimarex	logs exist

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Griswold, Jim, EMNRD

From: Patterson, Bob [bpatterson@keyenergy.com]
Sent: Monday, November 09, 2009 11:20 AM
To: Griswold, Jim, EMNRD
Cc: Gibson, Dan; Miller, Robyn
Subject: RE: Carlsbad Brine Facility
Attachments: Carlsbad Brine Production.xls

Jim,

I'm having some problems finding the information needed since the time that Key purchased Ram/Rowland. I have attached the spread sheet with production figures and we are still looking for more data. If you would send me the needed dates for all of the Key brine facilities, then I can get started on those as well. Thanks for your patience

Bob Patterson | Key Energy Services, LLC | Area Manager, Trucking Division | O: 575.394.2586 | C: 575.631.7597

-----Original Message-----

From: Griswold, Jim, EMNRD [mailto:Jim.Griswold@state.nm.us]
Sent: Wednesday, October 07, 2009 11:38 AM
To: Patterson, Bob
Cc: Gibson, Dan
Subject: Carlsbad Brine Facility

Bob,

Actually, it was my pleasure meeting with you. By OCD records it appears the Carlsbad #1 brine well went into production on 8/20/76 and was plugged 32 years later on 10/22/08. Our files are missing quarterly brine production and fresh water injection information from:

the 4th Quarter of 1981 thru the 4th quarter of 1986

the 1st and 4th quarters of 1989

the 1st quarter of 1992 thru the 4th quarter of 1993

the 4th quarter of 1998

the 3rd and 4th quarters of 1999

the 2nd and 3rd quarters of 2001 (no injection data)

and from the 1st quarter of 2004 thru plugging of the well.

Jim Griswold
Senior Hydrologist
Environmental Bureau
ENMRD/Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

direct: 505.476.3465
email: jim.griswold@state.nm.us

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Key Energy Services, LLC
Carlsbad Brine Well #1
BW-19

	Production	Injection
1981		
4th Quarter	118,853	
1982		
1st Quarter	131,935	
2nd Quarter	115,825	
3rd Quarter	87,570	
4th Quarter	72,745	
1983		
1st Quarter	37,155	
2nd Quarter	52,590	
3rd Quarter	49,460	
4th Quarter	47,675	
1984		
1st Quarter	38,648	
2nd Quarter	48,321	
3rd Quarter	82,930	
4th Quarter	54,515	
1985		
1st Quarter	44,613	
2nd Quarter	51,980	
3rd Quarter	54,895	
4th Quarter	66,945	
1986		
1st Quarter	30,650	
2nd Quarter	30,520	
3rd Quarter	10,340	
4th Quarter	16,205	
1989		
1st Quarter	10,765	
4th Quarter	12,362	
1992		
1st Quarter	19,255	
2nd Quarter	35,200	
3rd Quarter	43,020	
4th Quarter	30,591	
1993		
1st Quarter	14,145	
2nd Quarter	18,926	
3rd Quarter	24,545	
4th Quarter	31,833	
1998		
4th Quarter		

	Production	Injection
1999		
3rd Quarter		
4th Quarter		
2000		
1st Quarter		
2nd Quarter		
3rd Quarter		
4th Quarter		
2001		
1st Quarter		
2nd Quarter		
3rd Quarter		
4th Quarter		
2002		
1st Quarter		
2nd Quarter		
3rd Quarter		
4th Quarter		
2003		
1st Quarter		52821
2nd Quarter		21082
3rd Quarter		41133
4th Quarter		42548
2004		
1st Quarter	25550	57082
2nd Quarter	51100	59164
3rd Quarter	12771	19760
4th Quarter	12976	4717
2005		
1st Quarter		9967
2nd Quarter		
3rd Quarter		
4th Quarter		
2006		
1st Quarter		
2nd Quarter		
3rd Quarter		
4th Quarter		
2007		
1st Quarter		
2nd Quarter		
3rd Quarter		
4th Quarter		

Chavez, Carl J, EMNRD

To: Chavez, Carl J, EMNRD
Cc: Chavez, Carl J, EMNRD
Subject: Key Energy Services, L.L.C. (BW-19) Meeting on New Class III Well Application for Facility
GEN. CORRESPONDENCE

Date: 10-6-09 (9:30 a.m. – 10:30 a.m.)

Key Attendees:

Bob Patterson (Area Manager- Trucking Division)
Rex Alexander (Trucking Manager)
Dan Gibson (Corporate Environmental Manager)
H.C. Putman (Area Manager)

OCD Attendees:

Carl Chavez
Jim Griswold
Glenn von Gonten

Key had no plan to present, but wanted to listen to OCD thoughts on an application for a new Class III Well, since the OCD Moratorium on new applications ended back in June of 2009. Key has a modern facility at the location near its plugged and abandoned BW-019, and would prefer to drill another well at the facility.

- Trailer House nearby BW-019. OCD has siting and land ownership concerns..... set-backs from lease line, away from population centers, city limits,....
- OCD shows well log from nearby well with deeper salt formation (Castile Fm.) at about 1000 ft. bgl with a stronger anhydrite back would be preferred over shallow Salado Fm. w/ ledges type brine well. Key like idea of deeper well on same facility in order to use its modern facility nearby BW-019.
- OCD likes the single casing w/ 2 strings of tubing well construction, but would consider what Key proposes.
- Key will need to look at surrounding wells to create a cross-section of the hydrogeology across the area to determine if the Castile Fm. may be present beneath their facility. Key owns 30 acres of land on state mineral lease land. Key could buy a couple more acres from the landowner?
- There will probably be public comments associated with any new wells drilled at the facility. Be prepared... Key states that if well is deeper and can be placed at the facility, can use existing Key facility and depth coupled w/ well construction into Castile (if geology permits) may make a new well at the facility possible.....
- OCD mentions that there will be logging requirements, i.e., cement bond log at completion of cementing casing, and other logs. Would like upper 200 ft. logged, unlike oil and gas well logs that miss this zone.
- OCD mentions that Key will need to submit an OCD C-108 Form and the numberless brine well application forms with its submittal package. OCD mentions that WQCC Regulations 20.6.2 NMAC includes all of the info. needed for a new well application..... look there to see what OCD expects from Key for the new Class III Well.
- OCD mentions that new Class III wells will need to meter or track injection vs. production of brine. Key states that BW-28 is fully metered...
- OCD mentions that any new well at the facility will require a new well or permit application.
- Key is the first new well application, since the moratorium ended.....
- OCD mentions the "Closure Plan" requirements in Key's Discharge Plans and recommends that any subsidence monitoring, well monitoring, facility decommissioning, continued use of the facility, etc. should be submitted to the OCD in the form of a "Closure Plan" to address the discharge permit requirement. For example, at BW-19, the closure plan to focus on the PA's brine well, facility, subsidence monitoring, etc., but may also summarize how the facility will not be decommissioned, but used for the new well, but may satisfy the closure requirements for BW-019? Full or partial closure?
- Key mentioned that they were interested in using its plugged and abandoned Eunice Well for disposal into the salt cavern..... OCD mentioned that Key may want to take a look at the Brine Well Working Group comments from March of 2009 at "BW-999" under OCD Online to view the detailed discussion of the concerns under the "Talking Points" thumbnail as there were some issues identified related to this subject depending on the waste type, etc.

- Key will put an application package together and meet with the OCD again to make sure the package is acceptable and move forward with the submittal process. Ok.

END.....

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3490
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/oed/index.htm>
(Pollution Prevention Guidance is under "Publications")

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Tuesday, October 14, 2008 10:13 AM
To: 'Patterson, Bob'
Cc: Philliber, Mark; Price, Wayne, EMNRD; Sanchez, Daniel J., EMNRD; Macquesten, Gail, EMNRD; Gum, Tim, EMNRD
Subject: FW: Key Energy Services, LLC. BW-19 C-103 PA Approval
Attachments: BW-19 PA Approval 2-19-08.tif

Bob:

The Oil Conservation Division (OCD) is writing to request the status of the plug and abandonment of BW-19 in Carlsbad, NM. OCD records indicate that Wayne Price (OCD) signed a C-103 form approving the plug and abandonment of BW-19 on February 19, 2008.

Has the well been plugged and abandoned according to the signed C-103? If so, please update the OCD on the plug and abandonment and submit the final C-103 to me by close of business October 16, 2008. If the well has not been plugged and abandoned in accordance with the signed C-103, then Key Energy Services LLC is out of compliance with the USEPA 90 day corrective action period and has 60 days from today's date to plug and abandon the well in accordance with the C-103. In addition, the OCD requires the following for BW-19:

C-103 City of Carlsbad Well No. 1 (BW-19)

API# 30-015-21842

Conditions of Approval

- 1) A sonar test of the salt cavern is required in advance of plugging and abandoning the well. If a Sonar cannot be run, then OCD will require seismic and subsidence monitor and will require additional financial assurance.
- 2) Cavern must be filled with brine water in advance of plugging and abandonment operations.
- 3) Cement must be pressure grouted from bottom to top or surface under adequate pressure. Class "C" Cement from CIBP Setting Depth to surface is required.
- 4) Install a plug and abandonment marker.
- 5) Final C-103 Form shall be submitted within 30 days of plug and abandonment with final construction details.

The above plug and abandonment work must be completed within 60 days of the date of this message. Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
 New Mexico Energy, Minerals & Natural Resources Dept.
 Oil Conservation Division, Environmental Bureau
 1220 South St. Francis Dr., Santa Fe, New Mexico 87505
 Office: (505) 476-3491
 Fax: (505) 476-3462
 E-mail: CarlJ.Chavez@state.nm.us
 Website: <http://www.emnrd.state.nm.us/oed/index.htm>
 (Pollution Prevention Guidance is under "Publications")

From: Chavez, Carl J, EMNRD
Sent: Tuesday, February 19, 2008 8:36 AM
To: 'Patterson, Bob'
Cc: Price, Wayne, EMNRD; Gum, Tim, EMNRD

10/20/2008

Subject: Key Energy Services, LLC. BW-19 C-103 PA Approval

Bob:

Please find attached OCD approval from Mr. Wayne Price (Environmental Bureau Chief) dated 2/19/2008 on Key Energy Services, LLC (Key) C-103 for Brine Well 19 (API# 30-015-21842). Please submit the final report within 30 days of completion of field work.

Also, Key will need to submit an APD to OCD Santa Fe with a copy to the OCD Artesia District Office for the new UIC Class III replacement brine well. We will need a bond in place for the new well. Perhaps a Rider to the existing \$50K bond with the new API# and well name, etc. would work. Key will need an API# for the new bond or bond rider. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/oed/index.htm>
(Pollution Prevention Guidance is under "Publications")

10/20/2008

Submit 3 Copies to Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

BW-19

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-015-21842
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name City of Carlsbad
8. Well Number 1
9. OGRID Number
10. Pool name or Wildcat Brine Mining Well

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☐ Other **Brine**

2. Name of Operator
Key Energy Services, LLC

3. Address of Operator
6 Desta Drive, Suite 4400, Midland, Texas 79705

4. Well Location
Unit Letter **H**, **2420** feet from the **North** line and **330** feet from the **East** line
Section **36** Township **22S** Range **26E** NMPM **Lea** County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

Pit or Below-grade Tank Application ☐ or Closure ☐ **Not applicable**

Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____

Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☒
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

See Attached wellbore diagram for details.

Key Energy plans to plug and abandon this well. The well is a brine well under Permit# M19264. Key Energy will drill a new brine well nearby into the same salt section at a future date. The salt section is from 710 to 930'.

In early 2008, four separate attempts to squeeze a casing leak between 95-105' were performed. The last attempt pumped 59 bbls of cement at an AIR of 0.8 bpm, AIP 1250 psi. After drilling out cement a pressure test of 300 psi bled back to 200 psi in 5 minutes. A subsequent temperature survey showed the squeeze cement to be positioned outside casing from 70-160 feet.

Proposed P&A procedure:

Set cement retainer at 600' (whipstock top at 628')

Pump 100 sx of Class C cement below retainer.

POOH to 100 feet, place cement plug from 100-600 feet. WOC. Tag top of cement plug.

Pump cement to fill casing to surface. Repeat, if necessary, until TOC remains at surface.

Cut off casing stubs, place P&A marker.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOC guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE M. Duff TITLE Agent for Key Energy

DATE 2-7-2008

Type or print name
For State Use Only

E-mail address:

Telephone No.

APPROVED BY: [Signature]

TITLE ENVIRONMENTAL CHIEF

DATE 2/17/08

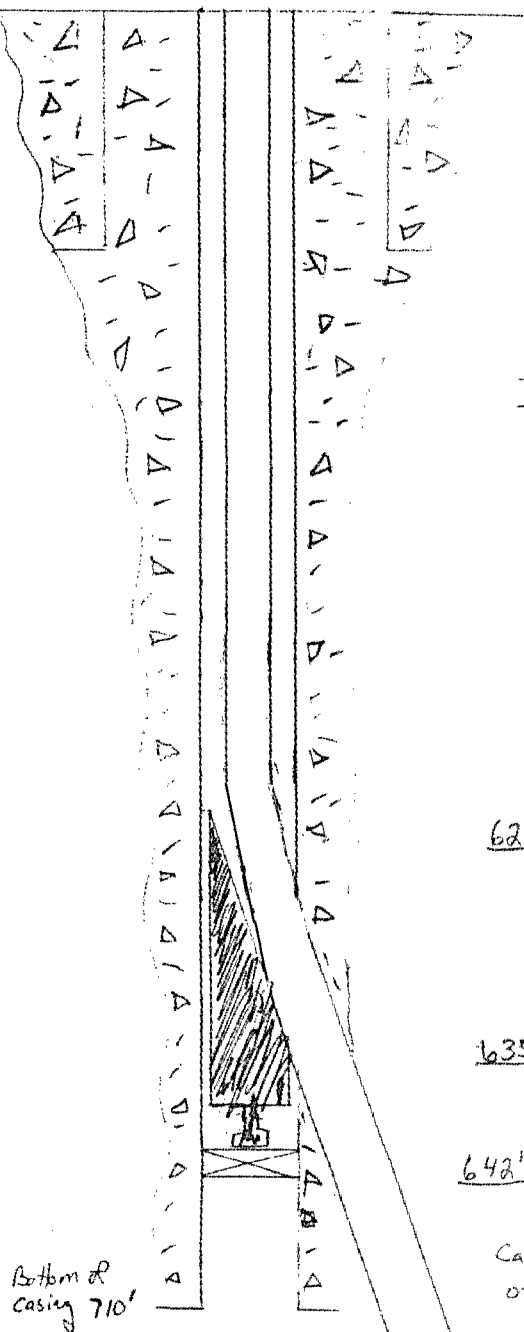
Conditions of Approval (if any):

RECEIVED
FEB 11 PM 3 39

COPY

→ ORIG TO ARTESIA DISTRICT

City of Carlsbad #1
Trucker's Drive Station
Current Wellbore Status
4-25-03



350' - 8 7/8" 36" J-55 casing
Cemented w/150 sxs Class "C" + 4% CaCl₂
Circulated to surface
87' csg joints

710' - 5 1/2" 15.5# csg
Cemented w/150 sxs Class "C" + 4% CaCl₂
Circulated to surface
32' csg joints

628' - Top of whipstock

635' - Bottom of whipstock

642' - Bridge plug set

Casing at 692' down to bottom
of csg at 710' is back

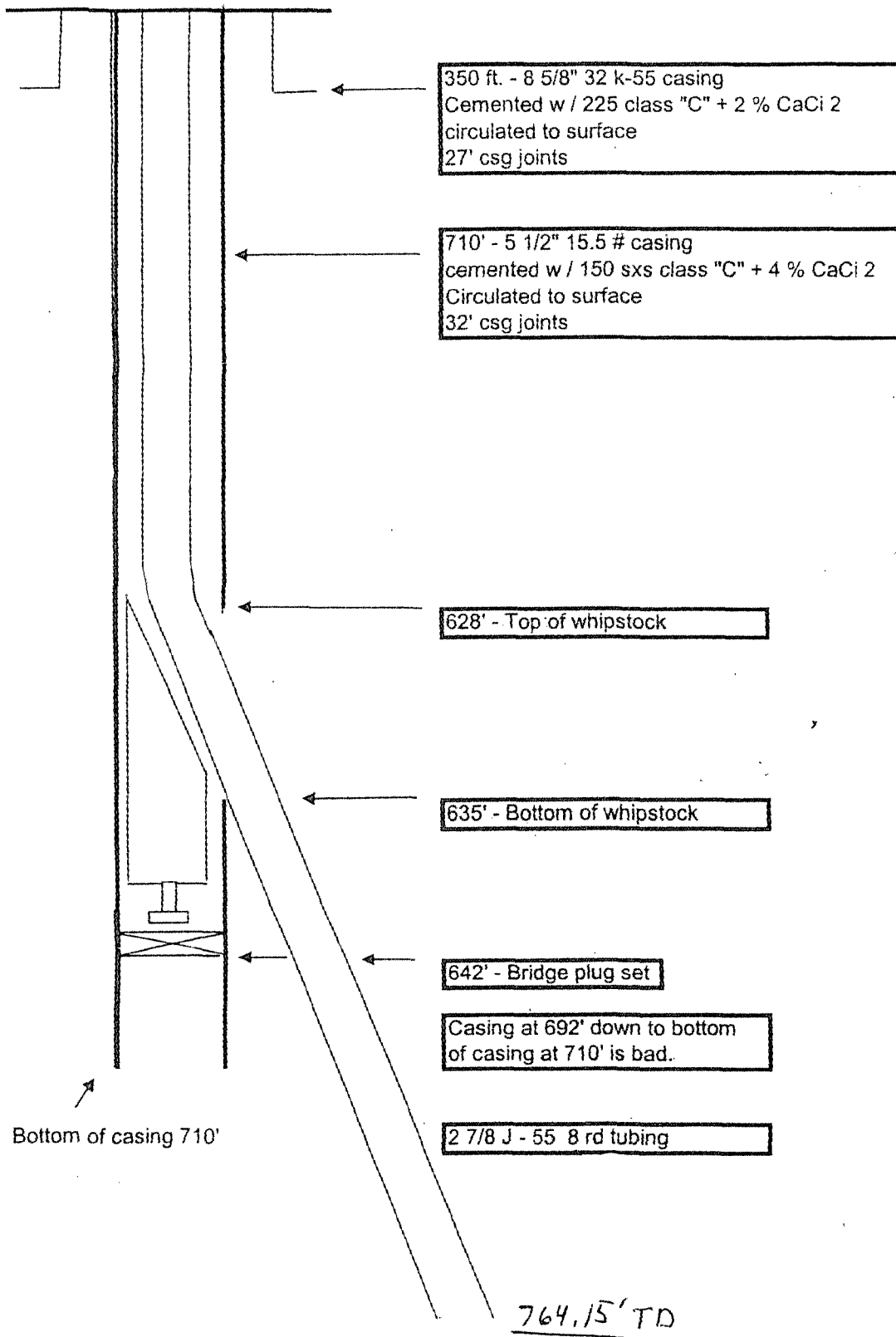
2 3/8 J-55 8rd tubing

8' Perforated sub

5 Lb Hco. collar

764.15' TD

Key Energy Services
City of Carlsbad Well #1
2420' FML + 330' FEL
S 36 T 22S R 26E ULH
Eddy Co. New Mexico



Elevation 3199'

Current Wellbore Status

3/25/93

350' - 8 5/8", 32#, K-55 Casing ✓

Cemented w/225 sxs Class "C" + 2% CaCl₂

Circulated cement to surface

710' - 5 1/2", 15.5#, Casing ✓

Cemented w/150 sxs Class "C" + 4% CaCl₂

Circulated 15 sxs to surface

2 7/8", 6.5#, 8rd tubing @ 886'

with 4 3/4" bit welded on bottom collar

4 3/4" Hole

T.D. @ 908' (3/93)

Original T.D. @ 930' ✓

ROWLAND TRUCKING, INC.
City of Carlsbad Well No. 1
2420' FNL & 330' FEL
Section 36, T-22S, R-26E
Eddy County, New Mexico

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Tuesday, October 14, 2008 10:13 AM
To: 'Patterson, Bob'
Cc: Philliber, Mark; Price, Wayne, EMNRD; Sanchez, Daniel J., EMNRD; Macquesten, Gail, EMNRD; Gum, Tim, EMNRD
Subject: FW: Key Energy Services, LLC. BW-19 C-103 PA Approval
Attachments: BW-19 PA Approval 2-19-08.tif

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C-103 City of Carlsbad Well No. 1 (BW-19)**API# 30-015-21842****Conditions of Approval**

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- 2) Cavern must be filled with brine water in advance of plugging and abandonment operations.
- 3) Cement must be pressure grouted from bottom to top or surface under adequate pressure. Class "C" Cement from CIBP Setting Depth to surface is required.
- 4) Install a plug and abandonment marker.
- 5) Final C-103 Form shall be submitted within 30 days of plug and abandonment with final construction details.

The above plug and abandonment work must be completed within 60 days of the date of this message. Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/ocd/index.htm>
(Pollution Prevention Guidance is under "Publications")

From: Chavez, Carl J, EMNRD
Sent: Tuesday, February 19, 2008 8:36 AM
To: 'Patterson, Bob'
Cc: Price, Wayne, EMNRD; Gum, Tim, EMNRD

10/14/2008

Subject: Key Energy Services, LLC. BW-19 C-103 PA Approval

Bob:

Please find attached OCD approval from Mr. Wayne Price (Environmental Bureau Chief) dated 2/19/2008 on Key Energy Services, LLC (Key) C-103 for Brine Well 19 (API# 30-015-21842). Please submit the final report within 30 days of completion of field work.

Also, Key will need to submit an APD to OCD Santa Fe with a copy to the OCD Artesia District Office for the new UIC Class III replacement brine well. We will need a bond in place for the new well. Perhaps a Rider to the existing \$50K bond with the new API# and well name, etc. would work. Key will need an API# for the new bond or bond rider. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/ocd/index.htm>
(Pollution Prevention Guidance is under "Publications")

10/14/2008

Submit 3 Copies to Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

BW-19

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-015-21842	
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>	
6. State Oil & Gas Lease No.	
7. Lease Name or Unit Agreement Name City of Carlsbad	
8. Well Number 1	
9. OGRID Number	
10. Pool name or Wildcat Brine Mining Well	

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☐ Other **Brine**

2. Name of Operator
Key Energy Services, LLC

3. Address of Operator
6 Desta Drive, Suite 4400, Midland, Texas 79705

4. Well Location
Unit Letter **H**, **2420** feet from the **North** line and **330** feet from the **East** line
Section **36** Township **22S** Range **26E** NMPM **Lea** County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

Pit or Below-grade Tank Application ☐ or Closure ☐ **Not applicable**

Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____

Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☒
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

See Attached wellbore diagram for details.

Key Energy plans to plug and abandon this well. The well is a brine well under Permit# M19264. Key Energy will drill a new brine well nearby into the same salt section at a future date. The salt section is from 710 to 930'.

In early 2008, four separate attempts to squeeze a casing leak between 95-105' were performed. The last attempt pumped 59 bbls of cement at an AIR of 0.8 bpm, AIP 1250 psi. After drilling out cement a pressure test of 300 psi bled back to 200 psi in 5 minutes. A subsequent temperature survey showed the squeeze cement to be positioned outside casing from 70-160 feet.

Proposed P&A procedure:

Set cement retainer at 600' (whipstock top at 628')

Pump 100 sx of Class C cement below retainer.

POOH to 100 feet, place cement plug from 100-600 feet. WOC. Tag top of cement plug.

Pump cement to fill casing to surface. Repeat, if necessary, until TOC remains at surface.

Cut off casing stubs, place P&A marker.

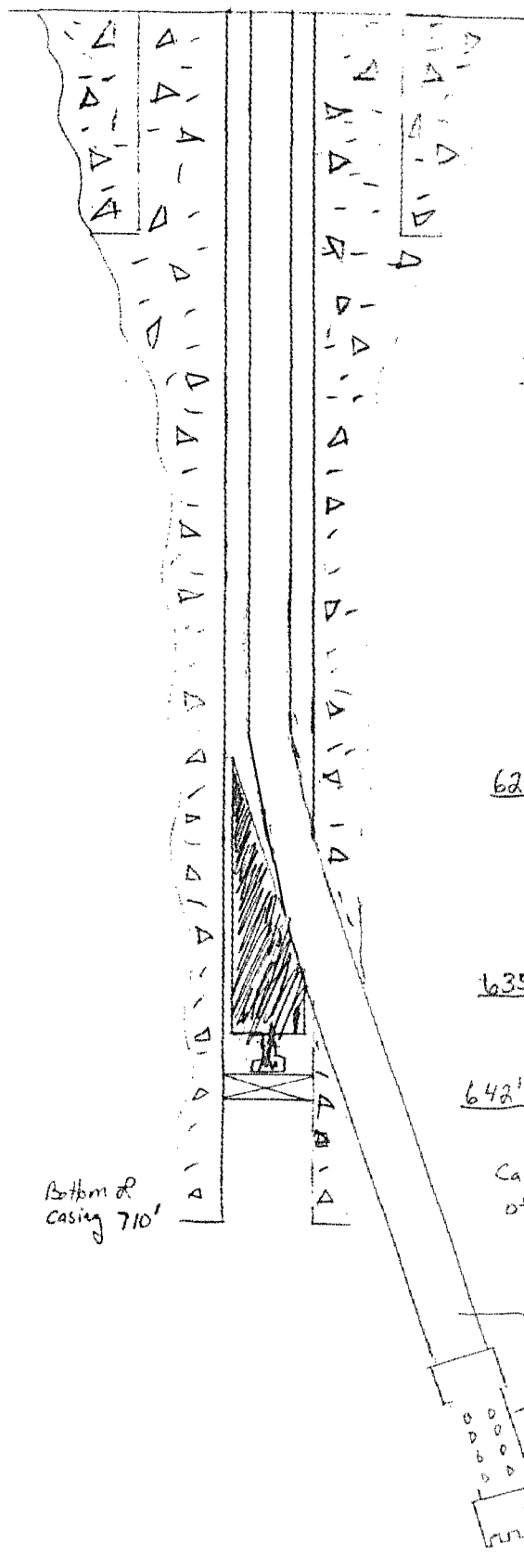
I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE M. Duffus TITLE Agent for Key Energy DATE 2-7-2008

Type or print name COPY E-mail address: _____ Telephone No. _____
For State Use Only ORIG TO ARTESIA DISTRICT

APPROVED BY: [Signature] TITLE ENVIRONMENTAL CHIEF DATE 2/17/08
Conditions of Approval (if any): _____

City of Carlsbad #1
Trucker's Drive Station
Current Wellbore Status
4-25-03



350' - 8 5/8" 31# J-55 casing
Cemented w/ 150 sxs Class "C" + 4% CaCl₂
Circulated to surface
27' csg joints

710' - 5 1/2" 15.5# Csg
Cemented w/ 150 sxs Class "C" + 4% CaCl₂
Circulated to surface
32' csg joints

628' - Top of whipstock

635' - Bottom of whipstock

642' - Bridge plug set

Casing at 692' down to bottom
of csg at 710' is bad

2 7/8 J-55 8rd tubing

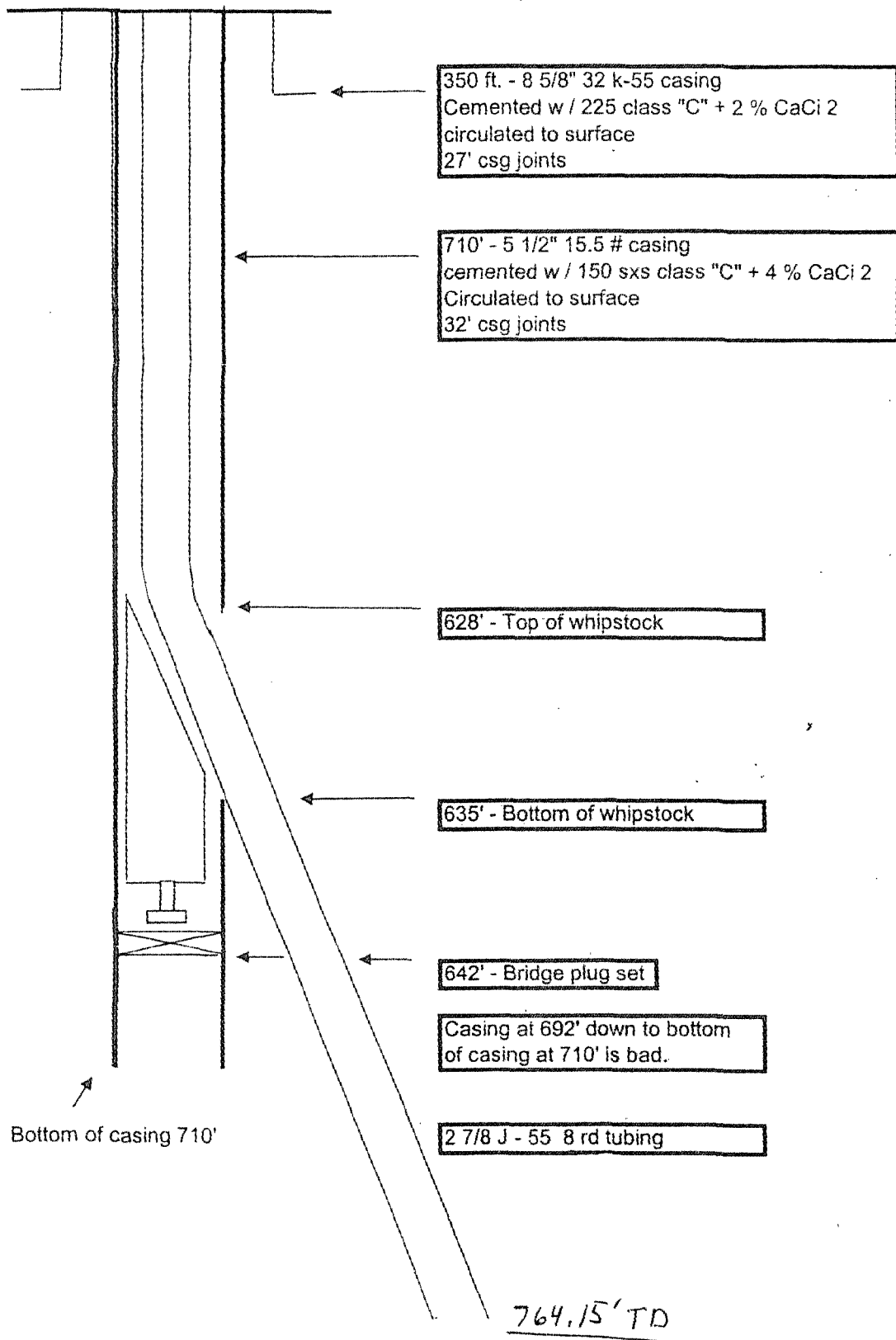
8' perforated sub

SLO-Hex collar

764.15' TD

Bottom of
casing 710'

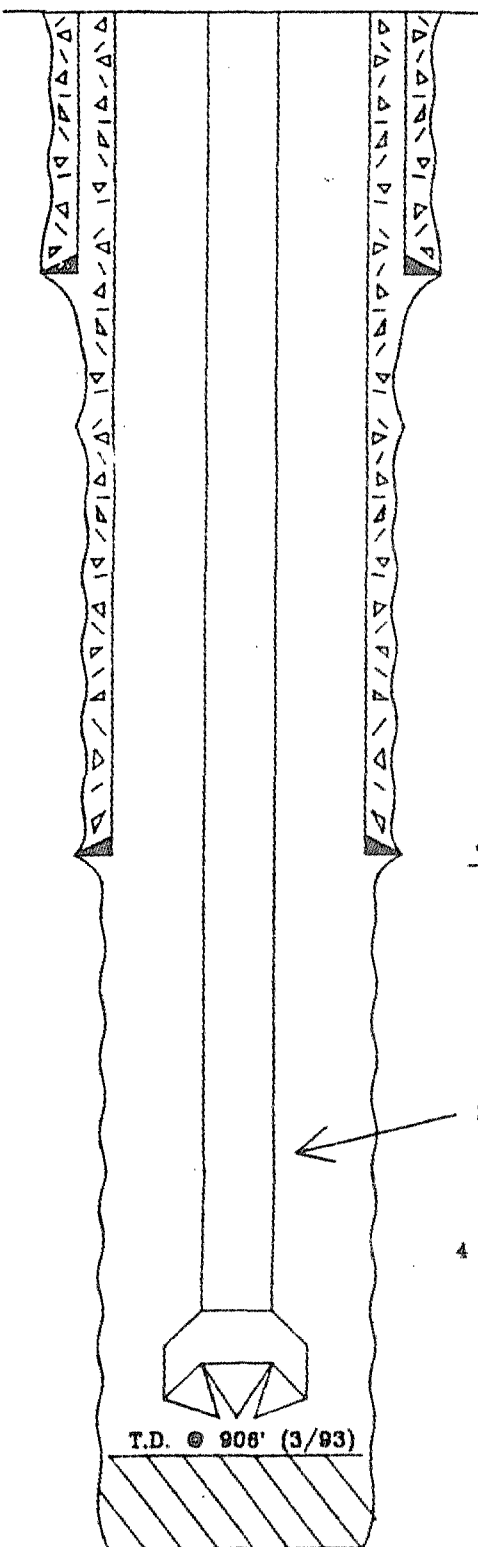
Key Energy Services
City of Carlsbad Well #1
2420' FUL + 330' FEL
S 36 T 22 S R 26 E ULH
Eddy Co. New Mexico



Elevation 3189'

Current Wellbore Status

3/25/93



350' - 8 5/8", 32#, K-55 Casing

Cemented w/225 sxs Class "C" + 2% CaCl₂

Circulated cement to surface

710' - 5 1/2", 15.5#, Casing

Cemented w/150 sxs Class "C" + 4% CaCl₂

Circulated 15 sxs to surface

2 7/8", 6.5#, 8rd tubing @ 886'

with 4 3/4" bit welded on bottom collar

4 3/4" Hole

T.D. @ 908' (3/93)

Original T.D. @ 930'

ROWLAND TRUCKING, INC.
City of Carlsbad Well No. 1
2420' FNL & 330' FEL
Section 36, T-22S, R-26E
Eddy County, New Mexico

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, October 10, 2008 11:26 AM
To: 'Shelton, Jack'; Price, Wayne, EMNRD
Cc: Philliber, Mark; Gum, Tim, EMNRD
Subject: RE: Key Energy Brine well PA

Mr. Shelton:

Re:

KEY ENERGY SERVICES, LLC.	KEY TRUCKERS BRINE - CARLSBAD	BW-19	30-015- 21842	N 32 20' 56.71" W 104 14' 12.93"	(UL-H) 36-22S- 26E	Eddy
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The OCD is also awaiting a signed C-103 for BW-19 in Carlsbad. Both BW-9 and 19 were required to be plugged and abandoned by September 4, 2008. Please provide the OCD with the status of receipt of the C-103 for BW-19 too.

Thank you.

Carl J. Chavez, CHMM
 New Mexico Energy, Minerals & Natural Resources Dept.
 Oil Conservation Division, Environmental Bureau
 1220 South St. Francis Dr., Santa Fe, New Mexico 87505
 Office: (505) 476-3491
 Fax: (505) 476-3462
 E-mail: CarlJ.Chavez@state.nm.us
 Website: <http://www.emnrd.state.nm.us/oecd/index.htm>
 (Pollution Prevention Guidance is under "Publications")

From: Shelton, Jack [<mailto:jshelton@keyenergy.com>]
Sent: Monday, October 06, 2008 7:56 AM
To: Chavez, Carl J, EMNRD; Price, Wayne, EMNRD
Cc: Philliber, Mark; Hill, Larry, EMNRD
Subject: RE: Key Energy Brine well PA

Mr. Chavez, I sent the signed copies Fed Ex on Friday to you, should be delivered today.

If I need to send to OCD in Hobbs I will but I talked to Buddy Hill with OCD and he told me to send them to you.

Thanks Jack

Jack Shelton | Key Energy Services | PA Manager | Po Box 1068 Andrews, Tx 79714 | O: 432.523.5155 | F: 432.523.6230 | C: 432.638.3756

-----Original Message-----

From: Chavez, Carl J, EMNRD [<mailto:CarlJ.Chavez@state.nm.us>]

10/10/2008

Sent: Friday, October 03, 2008 5:13 PM
To: Price, Wayne, EMNRD
Cc: Shelton, Jack; Philliber, Mark; Hill, Larry, EMNRD
Subject: RE: Key Energy Brine well PA

Wayne:

The C-103 was not signed the Key Agent. The OCD needs a signed C-103. Thanks.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/oecd/index.htm>
(Pollution Prevention Guidance is under "Publications")

From: Price, Wayne, EMNRD
Sent: Thursday, October 02, 2008 9:51 AM
To: Chavez, Carl J, EMNRD
Subject: FW: Key Energy Brine well PA

From: Shelton, Jack [<mailto:jshelton@keyenergy.com>]
Sent: Tuesday, September 30, 2008 1:01 PM
To: Price, Wayne, EMNRD
Cc: Philliber, Mark
Subject: Key Energy Brine well PA

Hello Mr. Price, I have completed the C-103 and will mail hard copies to you for approval.

G.P. Sims Well # 2
Brine well
30-025-25525

Please confirm that I've sent this to the right office.

Thank you,

Jack Shelton | Key Energy Services | PA Manager | Po Box 1068 Andrews, Tx 79714 | O: 432.523.5155 | F: 432.523.6230 | C: 432.638.3756

This inbound email has been scanned by the MessageLabs Email Security System.

10/10/2008

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