		((2 // >	7 0	(X0012=10 10 10
241-05	B) (B) (B) (B) (B) (B) (B) (B) (B) (B) (ENGINEER	LOGGED IN 1-05	TYPE SWD	1251885
PATEIN/ I	SUSPENSE	ENGINEERO	LOGGED IN	TYPE	/ - 1 - 1 1

Print or Type Name

Signature

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau - 1220 South St. Francis Drive, Santa Fe, NM 87505



			DMI	NISTRATIVE APPLICATION CHECKLIST
TH	IS CHECK	LIST IS MA		FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS
Applic	ation A:	ronyms		WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE
	[NSL-N [OF	ion-Stan iC-Down PC-Poo	dard Loc hole Con ol Commi WFX-Wat [SW	cation] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication] nmingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling] ingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement] terflood Expansion] [PMX-Pressure Maintenance Expansion] D-Salt Water Disposal] [IPI-Injection Pressure Increase] anced Oil Recovery Certification] [PPR-Positive Production Response]
	•			and on the control of
[1] -	TYPE	OF AP [A]	Location	ION - Check Those Which Apply for [A] n - Spacing Unit - Simultaneous Dedication SL NSP SD
		Check	One Only	y for [B] or [C]
				ngling - Storage - Measurement
		[C]		n - Disposal - Pressure Increase - Enhanced Oil Recovery FX PMX SWD IPI EOR PPR
		[D]	Other: S	Specify
[2]	NOTI	FICATI	ON REC	DUIRED TO: - Check Those Which Apply, or \Box Does Not Apply
(.**]	110.00	[A]		orking, Royalty or Overriding Royalty Interest Owners
		(B)	☐ Off	fset Operators, Leaseholders or Surface Owner
	.*	-[C)	Ap	plication is One Which Requires Published Legal Notice
	٠.	[D]		tification and/or Concurrent Approvating BLM or SLO Bureau of Land Management - Commissioner of Public Lands, State Land Office
		$(\mathbf{E}_J$	☐ For	r all of the above, Proof of Notification or Publication is Attached, and/or,
		[F]	☐ Wa	nivers are Attached
[3]				AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE INDICATED ABOVE.
approva	al is acc	urate an	d comple	hereby certify that the information submitted with this application for administrative ete to the best of my knowledge. I also understand that no action will be taken on this ormation and notifications are submitted to the Division.
		Note:	Statement	must be completed by an individual with managerial and/or supervisory capacity.

Title

e-mail Address

Date

APPLICATION FOR AUTHORIZATION TO INJECT PNM GAS RESOURCES

SAN YSIDRO #6 625 FT. FNL & 1420 FT. FWL SEC. 20, TWN. 15N, RNG 1E STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

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

FORM C-108 Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

	MILIONIONIONIONIONIONIONIONIONI
I.	PURPOSE: Secondary Recovery Pressure Maintenance XX Disposal Storage Application qualifies for administrative approval? XX Yes No
II.	OPERATOR: PNM Gas Resources
	ADDRESS: 414 Silver Ave. SW Albuquerque, NM 87158
	CONTACT PARTY: Joel Levine PHONE: 505-241-4527
III.	WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
IV.	Is this an expansion of an existing project? Yes XX No If yes, give the Division order number authorizing the project:
V.	Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
VI.	Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
VII.	Attach data on the proposed operation, including:
	 Proposed average and maximum daily rate and volume of fluids to be injected; Whether the system is open or closed; Proposed average and maximum injection pressure; Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and, If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
*VIII.	Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
IX.	Describe the proposed stimulation program, if any.
*X.	Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted)
*XI.	Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
XII.	Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
XIII.	Applicants must complete the "Proof of Notice" section on the reverse side of this form.
	Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
	NAME: Joel Levine TITLE: Senior Engineer
	SIGNATURE:DATE:
	E-MAIL ADDRESS:JLEVINE@PNM.com If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _X - Appropriate logging file 2-72 NMOCD

OPERATOR: _

PNM Gas Resources

	WELL No. 6	رفت عام PBTD AT 2319' دفت عام T.D. AT 2491'					5 1/2" CASING	TO 1035	2 3/8" TUBING	7 7/8" HOLE	914-9	8 5/8" CASING		WELLBORE SCHEMATIC	FOOTAGE LOCATION	WELL LOCATION: 625' FNL and 1,420' FWL	WELL NAME & NUMBER: San Ysidro #6
Perforated 2,208		Total Depth: 2,467'	Top of Cement: Surface	Cemented with: 630	Hole Size:		Top of Cement:	Cemented with:	Hole Size:		Top of Cement: Surface	Cemented with: 325	Hole Size: 12 - 1/		UNIT LETTER	С	
feet	Injection Interval		ace	SX.		Production Casing		SX.		Intermediate Casing	ace	5sx.	1/4"	WELL CONSTI Surface Casing	SECTION	20	
to 2,228'	nterval		Method Determined: Circulate	or	Casing Size: 5 1/2"	Casing	Method Determined:	or	Casing Size:	<u>le Casing</u>	Method Determined: Circulate	or	Casing Size: 8 - 5	WELL CONSTRUCTION DATA Surface Casing	TOWNSHIP	15N	
			Circulate	ft³	=			ft³			Circulate	ft ³	5/8"		RANGE	1E	

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

ATTACHMENT III. WELL DATA

A. TABULAR DATA

NAME:

SAN YSIDRO #6

LOCATION:

625' FNL & 1420' FWL SEC. 20, T-15-N, R – 1E SANDOVAL COUNTY, NM

SURFACE CASING:

8-5/8" 24# SET @450". CEMENTED WITH 365

SACKS OF CEMENT & CIRCULATED TO

SURFACE

PRODUCTION CASING:

5-1/2" 15.5# K-55 CASING TO TOTAL DEPTH OF 2500'. CEMENTED IN TWO STAGES WITH A STAGE COLLAR SET AT 1101' USING 360 SACKS OF CEMENT IN THE FIRST STAGE AND 270 SACKS OF CEMENT IN THE SECOND STAGE. CEMENT WAS CIRCULATED TO

SURFACE.

INJECTION TUBING:

2" EUE

PACKER:

BAKER MODEL "G" TENSION PACKER SET

AT ~ 2158" OR 50' ABOVE UPPERMOST

PERFORATION

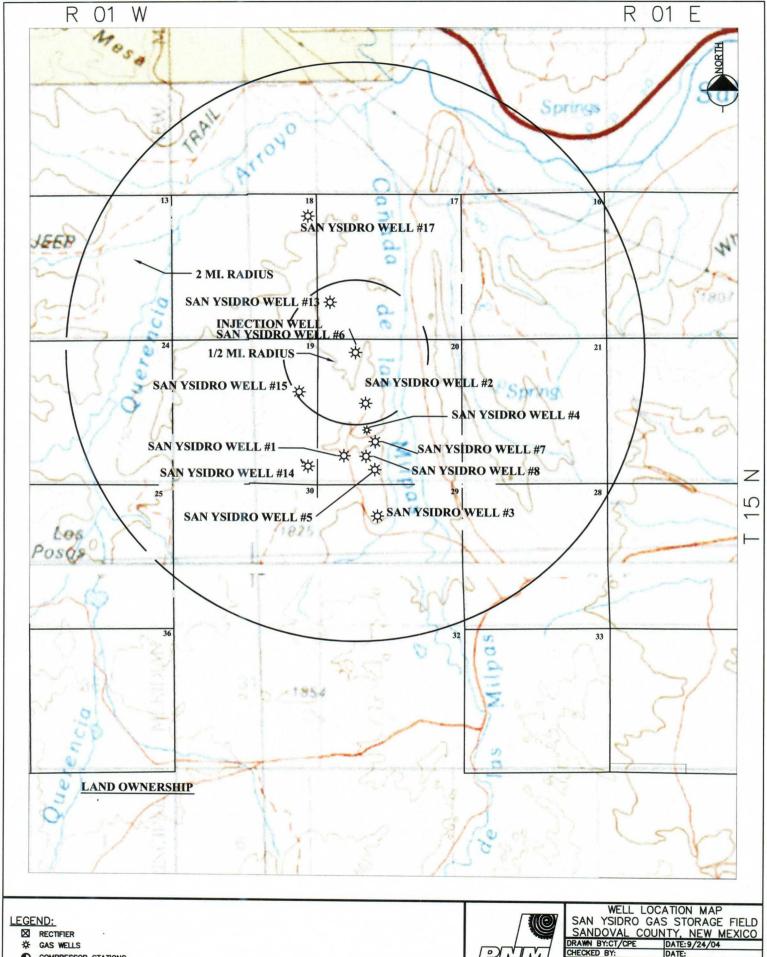
B. ADDITIONAL INFORMATION

- INJECTION INTERVAL IS THE AQUA ZARCA SANDSTONE. EXISTING DEPTHS ~ 2180' TO 2310"
- 2. THE INJECTION INTERVAL (AQUA ZARCA SANDSTONE) WAS PERFORATED AT DEPTHS OF 2208' TO 2228" AT 4 SHOTS PER FOOT
- 3. THE WELL (SAN YSIDRO #6) WILL BE CONVERTED TO A WATER INJECTION FOR WATER DISPOSAL PURPOSES
- 4. ONLY THE INJECTION INTERVAL WAS PERFORATED

5. THERE ARE NO OIL & GAS INTERVAL ZONES IN THE IMMEDIATE AREAS OF INJECTION WELL. ENTRADA FORMATION IN OTHER AREAS (295' TO 400'); TOLDILTO FORMATION (85' TO 294')

ATTACHMENT V.

- MAP THAT IDENTIFIES ALL WELLS WITHIN 2 MILE RADIUS & ½ MILE RADIUS DRAWN AROUND THE INJECTION WELL
- MAP THAT IDENTIFIES ALL LEASES WITHIN 2 MILE RADIUS & ½ MILE RADIUS DRAWN AROUND THE INJECTION WELL



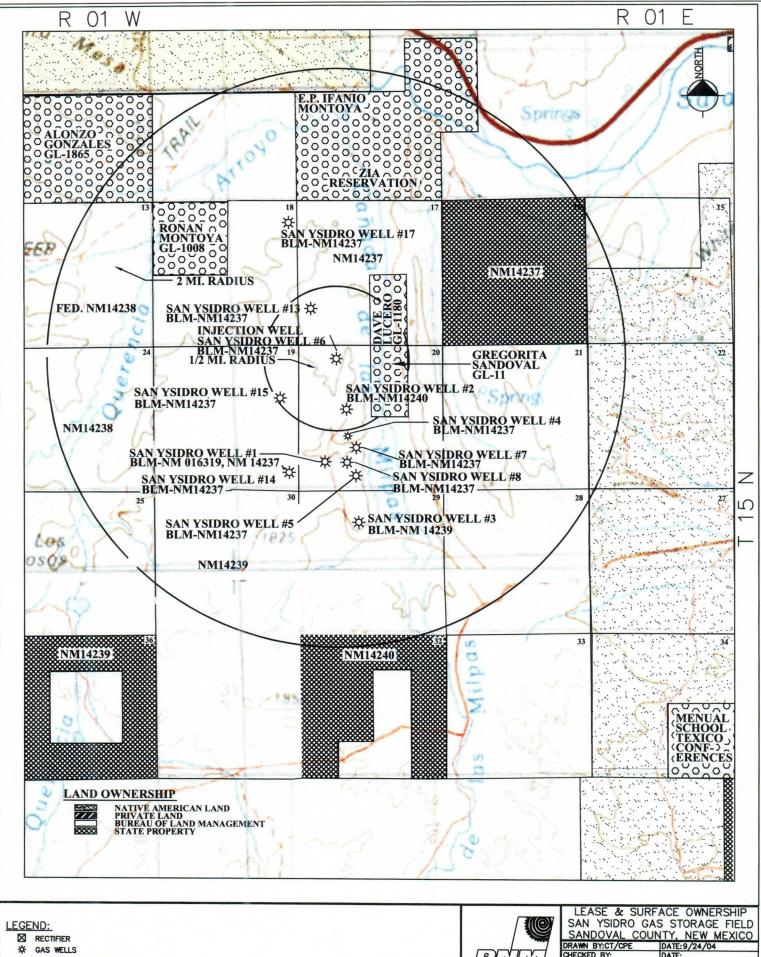
O COMPRESSOR STATIONS

ODORIZERS



	ATION MAP
SAN YSIDRO GAS	S STORAGE FIELD
	ITY, NEW MEXICO
DRAWN BY:CT/CPE	DATE:9/24/04
CHECKED BY:	DATE:
	DATE:
APPROVED BY:	DATE:
ACAD FILE: SYLO-KEYO	

SCALE:1" = 3520'PART V



COMPRESSOR STATIONS

ODORIZERS



SAN YSIDRO GAS STORAGE FIELD
SANDOVAL COUNTY, NEW MEXICO
DRAWN BY:CT/CPE DATE: 9/24/04
HECKED BY: DATE:

CHECKED BY: OK BY: DATE: ACAD FILE: SYLO-KEYO

PART V

ATTACHMENT VI. TABULATION OF DATA OF OFFSET WELLS

OPERATOR PNM GAS RESOURCES PNM GAS RESOURCES	WELL NAME SAN YSIDRO #1 SAN YSIDRO #2	FORMATION AQUA ZARCA AQUA ZARCA	DATE DRILLED 1972 FEB 1972 FEB	LOCATION SECTION M-20 F-20	TOWNSHIP 15-N	RANGE 1-E 1-E	FOOTAGE 990' FNL & 990' FEL 1270' FNL & 2040' FWL	TOTAL DEPTH 2479' 3385'	PERFORATED DEPTH 2268' TO 2290' 2223' TO 2255'
PNM GAS RESOURCES	SAN YSIDRO #3	AQUA ZARCA	1973 JULY	C-29	15-N	т Т	1270' FNL & 2040' FWL	2437'	2265' TO 2287'
PNM GAS RESOURCES	SAN YSIDRO #4	AQUA ZARCA	1972 FEB	K-20	15-N	1-E	2015' FSL & 1785' FWL	2467'	2247' TO 2270'
PNM GAS RESOURCES	SAN YSIDRO #5	AQUA ZARCA	1973 AUGUST	N-20	15-N	-	369' FSL & 1886' FWL	2443'	2285' TO 2305'
PNM GAS RESOURCES	SAN YSIDRO #6	AQUA ZARCA	1974 JAN	C-20	15-N	÷	625' FSL & 1420' FWL	2491'	2196' TO 2217'
PNM GAS RESOURCES	SAN YSIDRO #7	AQUA ZARCA	1974 JAN	N-20	15-N	1	1089' FSL & 1703' FWL	2411'	2260' TO 2280'
PNM GAS RESOURCES	SAN YSIDRO #8	AQUA ZARCA	1980 APR	N-20	15-N	<u>+</u>	2080' FSL & 540' FWL	2344'	2232' TO 2253'
PNM GAS RESOURCES	SAN YSIDRO #13	AQUA ZARCA	1975 SEPT	M-17	15-N	щ Т	1300' FSL & 550' FWL	2448	2170' TO 2200'
PNM GAS RESOURCES	SAN YSIDRO #14	AQUA ZARCA	1975 JUNE	P-19	15-N	<u>-</u>	654' FSL & 300' FEL	2588	2395' TO 2425'
PNM GAS RESOURCES	SAN YSIDRO #15	AQUA ZARCA	1975 JULY	H-19	15-N	1-E	1908' FNL & 618' FEL	2719'	2540' TO 2570'
PNM GAS RESOURCES	SAN YSIDRO #17	AQUA ZARCA	1975 JULY	A-18	15-N	1 - E	800' FNL & 300' FEL	2317'	2170' TO 2195
PRE ONGARD OPERATOR	PRE ONGARD #1	AQUA ZARCA		E-20	15-N	π	498' FNL & 2546' FWL		FOR CORE PLUGS ONLY
PRE ONGARD OPERATOR	PRE ONGARD #2C	AQUA ZARCA		F-20	15-N	i i i i	2380' FNL & 1861' FWL		FOR CORE PLUGS ONLY
PRE ONGARD OPERATOR	PRE ONGARD #4C	AQUA ZARCA		K-20	15-N	m	2023' FSL & 1551' FWL		FOR CORE PLUGS ONLY
PRE ONGARD OPERATOR	PRE ONGARD #6A	AQUA ZARCA		C-20	15-N	<u>1</u> ⊞	498' FNL & 2546' FWL		FOR CORE PLUGS ONLY
PRE ONGARD OPERATOR	PRE ONGARD #6B	AQUA ZARCA		C-20	15-N	÷	496' FNL & 1421' FWL		FOR CORE PLUGS ONLY

ATTACHMENT VI. TABULATION OF DATA OF OFFSET WELLS

OPERATOR WELL NAME	PRE ONGARD OPERATOR PRE ONGARD #6C	PRE ONGARD OPERATOR PRE ONGARD #2B	PRE ONGARD OPERATOR PRE ONGARD #2C	PRE ONGARD OPERATOR PRE ONGARD #2A	PRE ONGARD OPERATOR PRE ONGARD #4B	PRE ONGARD OPERATOR PRE ONGARD #4C	PRE ONGARD OPERATOR PRE ONGARD #7C	PRE ONGARD OPERATOR PRE ONGARD #5A	PRE ONGARD OPERATOR PRE ONGARD #5B	PRE ONGARD OPERATOR PRE ONGARD #50	PRE ONGARD OPERATOR PRE ONGARD #7A	PRE ONGARD OPERATOR PRE ONGARD #7B	PRE ONGARD OPERATOR PRE ONGARD #9		PRE ONGARD OPERATOR PRE ONGARD #8
FORMATION	AQUA ZARCA	AQUA ZARCA	AQUA ZARCA												
DATE DRILLED															
LOCATION SECTION	D-20	F-20	F-20	G-20	K-20	K-20	M-20	N-20	N-20	N-20	N-20	N-20	K-20	N-20	
TOWNSHIP	15-N	15-N	15-N												
RANGE	1-E	Н	ī÷	.	ĵ-E	1 - E	1 - E	Ť	Ė	1-E	1-E	1 E	1 - E	1 E	
FOOTAGE	496' FNL & 1121' FWL	2380' FNL & 1861' FWL	2536'FNL & 1549' FWL	2338' FNL & 2603' FEL	1891' FSL & 1912' FWL	2023' FSL & 1551' FWL	911' FSL & 1316' FWL	404' FSL & 2380' FWL	404' FSL & 2080' FWL	553' FSL & 1723' FWL	1007' FSL & 2526' FWL	903' FSL & 1907' FWL	2180' FSL & 1980' FWL	504' FSL & 2080' FWL	
TOTAL DEPTH															
PERFORATED DEPTH	FOR CORE PLUGS ONLY	FOR CORE PLUGS ONLY	FOR CORE PLUGS ONLY												



m 1-238/, v. 5-63//					-		<u>.</u>					_
is Mil	/	_	NITED				1.1	DUPLICAT (See otl			rm approv idget Burea	ed. u No. 42-R355.5/
P10 M"//	DEPA					TERIOR	₹:	structio reverse	ns on	EASE DES	GNATION A	ND SERIAL NO.
1/2/	·	GEC	LOGICA	AL SU	RVEY		·				4429	n /
WELL CO		ON OR		APLET	ON F	REPORT	AN	D LOG	* 5. 1	F INDIAN,	ALLOTTER	OR TRIBE NAME
AYPE OF WELL	L:	METT	GAS WELL] 10	RT	Other _Gas			7. t	NIT ACRE	MENT NAM	(I)
TYPE OF COMI	WORK	DEEP-	PLUG	יישום ך	۰. 🗀						EASE NAMI	
NAME OF OPERAT	OVER L	EN L	J BACK L		/R	Other			==- °. '			i
Source	Unique !	Ges Co	rapacet						9. 1	VELL NO.	SIMO	
ADDRESS OF OPER				A4 No		in the same				9		
TACATION OF WEL	A (Report lo	cation cle	erly and in	ecordance	soith and	u State reaut	remen	ta)*			POOL, OR	
At surface 991	FT. FR	ou ma	Sourm	F1988 &	990	FY. FMG	37	a geor	L188 41.	BEC., 1., 1.	, M., OR BL	OCK AND SURVEY
At top prod. into	erval reporte	d below	SME M	ABCUE	î.				Se	OR AREA	T-AGE	R-TE,
At total depth	Sanar	ar ara								H. H. P.		*
=== = ==				14. PE	EMIT NO.		DATE	ISSUED	12.	COUNTY OF	R 1	3. STATE
				<u> </u>					See	PARISA	a	ten Benico
DATE SPUDDED			D 17. DAT			o prod.) 18		VATIONS (DF,		ETC.)*	19. ELEV.	CASINGREAD
TOTAL DEPTH, MD	Fee. 1,	1972	FEE.	TVD 22	JE MUI.	TIPLE COMPL	T	23. INTER		PARY TOOL		FY a
90 m. 100			m. 10		HOW M	VNA.	•	DRILLI	ED BY	1450 s		
PRODUCING INTER	VAL(8), OF T				NAME ()	ED AND TYD)	•		1 00	75174 Y	25. WA	S DIRECTIONAL
Not Per	TOATE	•									1 .	ro
TYPE ELECTRIC A		a.	Carrie P			merce C	ristoeste.	me Reman			27. WAS W	ELL CORED
I MINGT 100-	C C C C C C C C C C C C C C C C C C C	900LD 400	CASI	NG RECO		ort all string						<u> </u>
CABING SIZE	WEIGHT.	LB./FT.	DEPTH SE			LE SIEE			NTING RECOR	ID .	_ AM	OUNT PULLED
13-3/#		<u> </u>	300	72.	2	<i>\\</i> 2:	_	300 a	M0110			10102
_ 5-1 /2	15		2527	T	73.5		. 1	OT STATE		an at	SO Cu	ST. CF
	-		_83653	28 e ga	60		- AND		P. ASSEST			Mart.
	<u> </u>	LINE	R RECORD					30.	TUBE	NG RECO	R.ID	
SIZE	TOP (MD)	вот	NOM (MD)	SACES CI	BMENT ⁴	SCREEN (M	D)	SIZB	DEPTH	CM) THE) PAC	KER SET (MD)
	 / 				, <u></u>			2-3/#	2	28 17		
PERFORATION REC	ORD (Intervo	il, sise an	d number)	<u> </u>		82.	A	ID, SHOT, I	FRACTURE.	CEMENT	Sections	Pag
						DEPTH IN	TERVA	L (MD)	AMOUNT	AND EXP	1 m 4m	
MOT P	CAFORATI	3 0.								<u> </u>	(1,11	
		-								1	1814 4	4070
								-		- ₩	MY 3	131/2
.*				·	PRO	DUCTION		·········		To	CON	COM
TE FIRST PRODUCT	ION I	RODUCTIO	OBTEM N	Flowing, g	se lift, p	um pingeise	and i	type of pump)	Apr 3	THE Y	oducing of
TE OF TEST	! HOURS TES	TED	CHOKE SIE	PROD'	N. FOR	OIL—BBL.		GAS-MCF		TER		III ATIO
.,					PERIOD			}	"			
W. TURING PROOF.	CASING PRI		CALCULATED 24-HOUR BAT	OIL-	BBL.	GAS-	MCF.	V	VATER-BBL.		on deavir	r-Lei (coan.)
			>							- 1	<u> </u>	
DISPOSITION OF G	AB (Sold, use	d for fuel,	vented, etc.)						TES	T WITNESS	N.AY	-0 1572
LIST OF ATTACH	MENTS								1		11.131	0 1316
										U.	S. GEO!	OHOLL SURV
I hereby certify	that the for	egoing an	d attached i	nformation	a is comp	plete and cor	ect a	s determined	from all a	railable re	cor D URA	ISO, COLO.
signedG	riginal sign ILBERT D. N	ed by	10	mr	י איז דיי	Dank to				DATE	Mani s	1972
		بالمسيهد	C-181-	11						DATE		##

*(See Instructions and Spaces for Additional Data on Reverse Side)

UNITED STATES SUBMIT IN DUPLICATE (See other instructions on reverse side) GEOLOGICAL SURVEY SUBMIT IN DUPLICATE (See other instructions on reverse side)	Form approved.
	Budget Bureau No. 42-R355.5
717 F. / GEOLOGICAL SURVEI	SE DESIGNATION AND SERIAL N
1 4 4 A B 2	INDIAN, ALLOTTES OR TRIES NAM
WELL COMPLETION OR RECOMPLETION REPORT AND LOG*	
a. TYPE OF WELL: OIL GAS DRY Other THE TENER OF DRY	T AGREEMENT NAME
L TYPE OF COMPLETION:	
WELL OVER EN BACK ESSVE. Uther	M OR LEASE NAME
NAME OF OPERATOR	48 Y81300
SOUTHEREN UNION GAS COMPANY OIL CONSERVATION COMPANY Santa Fo	2
	ELD AND POOL, OR WILDCAT
LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*	FILDUAT
At surface 2380 FY. FROM THE NORTH LINE & 1730 FY. PRICE THE BEST LINES OF	EC., T., R., M., OR BLOCK AND SURVI
At top prod. interval reported below Sale. As About	n de la
At total depth Same As ADSVE	HORES ONE
	OUNTY OR 13. STATE
Section 1	house May May
DATE SPUDDED 16. DATE T.D. REACHED 17. DATE COMPL. (Ready to prod.) 18. ELEVATIONS (DF, REB, RT, GS, E	TC.) 19. BLEV. CASINGHEAD
	BY TOOLS CABLE TOOLS
3396 FY. ED & TVD 2450' ES & TVD. HOW MANY' DRILLED BY	996 FT.
PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD).	25. WAS DIRECTIONAL SURVEY MADE
2236 - 2260 FT. MD & TWD Agua Zance	Na.
	27. WAS WELL CORED
THE BLECTRIC AND OTHER LOGS BUN GALLER PROPERTY ON THE THE BOLD AND LOG THREAT FOR ELECTRICAL DESCRIPT SONIC GALLER RAY, CEMENT BOLD LOG	Yan
CASING RECORD (Report all strings set in well)	****
CASING SIZE WEIGHT, LB./FT. DEPTH SET (MD) HOLE SIZE CEMENTING RECORD	AMOUNT PULLED
8-5/8 24.0/ 425 FT. 12-4/4" 500 SACES	House
5-1/2" 15.508 3395 PT. 7-7/8" 1st state consum	250 W. Ft.
CHARRY STARE COLLAR SET AT 1097 PT. R.K.B. CHARREST W/SO CHARREST STARE COLLAR SET AT 1097 PT. R.K.B. CHARREST W/SO	
	RECORD
SIZE TOP (MD) BOTTOM (MD) SACES CEMENT SCREEN (MD) SIZE DEPTE	SET (MD) PACKER SET (MD
	tr.
PERFORATION RECORD (Interval, size and number) 82. ACID, SHOT, FRACTURE, C.	PMENT SOUPERE PTC
	ND KIND OF MATERIAL USED
Penr. 4 sugre/rr. 2236 rr 2260 rr. 2236-2260 rr. 250 au.	7-1/25 HLL ACUS.
Toral or 96 moles (0.48 mole stat)	
PRODUCTION	
TO PIEST PRODUCTION PRODUCTION METHOD (Fowing, gas lift, pumping—size and type of pump)	WELL STATUS (Producing ox
DEGELVED	Care Systematic and
HOURS THAT CHOKE SIZE PROD'N. FOR OIL—BBL. GAS—BCF WATE	B-ESL. GAL-OIL BATIO
OW. TUBING PERS. CASING CHECKET ALCOHATED OIL—BBL. MAYER—BBL.	
DISA-HOUSTATE	OID GRAVITY-API (CORR.)
	WITHERED BY
DISPOSITION OF GAS (Sold, used for fuel, vented, stc.) U. S. GEOLOGICAL SURVEY TEST	
DURANGO, COLO.	
DURANSO, COLO.	
DURANSO, COLO. LIST OF ATTACHUSHTS COME AND MATERIA AMALYBAS	
DURANSO, COLO.	dable records

*(See Instructions and Spaces for Additional Data on Reverse Side)

UNITED STATES

SUBMIT IN DUPLICATE.

Form approved. Budget Bureau No. 42-R355.5.

DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

See other instructions on teverse side:

| See other instructions on teverse side: | S. LEASE DESIGNATION AND SERIAL NO. 12-R355.5.

14-08-0001-12395 6. IF INDIAN, ALLUITEE OR TRIBE NAME

WELL COMPLETION	0.0.00000000000000000000000000000000000					
	L WELL _	DRY (m)	her GAR ST	OBACE	7. UNIT AGREES	
b. TYPE OF COMPLETION: NEW WORK OVER OVER ON	e [m] Program	DIFF. Ot			S. FARM OR LE	AN GAS STORAGE
WELL OVER - CN	L. BACK	EESVROU	ner		Sam Ye	
SOUTHERN UNION GAS	COMPANY				9. WELL NO.	
ADDRESS OF OPERATOR		•				3
P. O. Box 838, FASS. LOCATION OF WELL (Report Invation	I I NOTON, I LEB	exioo 874	tate requirements			POOL, OR WILDCAT
At surface 1270 FT. FRO					11. SEC., T., R.,	M., OR BLOCK AND SURVEY
At top prod interval reported to	.,. SALE AB				OR AREA	T-15N, R-1E,
At total depth SALE AS		14 CERMIT NO		SSI ED	12. COUNTY OR	
	1				SAMPORAL	Non Marie
5. DATE SPUNDED 16. DATE TO. B.	васиев — 17. бате с	contil. (Ready to p	rad.) 18. ELEV	ATIONS FOR, RE	B. RT. GR. ZTC.)	19. ELEV. CASINGHEAD
7/20/13 1/27/7 0. TOTAL DEPTH, MD . TVD 21 0000	73	7/30/73	5516	er. R.K.	В	5805 FT.
		i HOW MAN	Y• :	DRILLED I		1
1. PRODUCING INTERVALUED, OF THIS	COMPLETION- TOP, B	BOTTOM, NAME (MD	AND TVD) *		0-2445 5	25. WAS DIRECTIONAL.
2276 - 2296 FT.	table TVM Am	us Janon				No.
	-	CA LIGHTO				7. WAS WELL CORED
B. TYPE ELECTRIC AND STREET 1965 F	i allia i	RAY-HEUTRON		- B		i. was well coard
INDUCTION ELECTRICAL	CASING CASING	G RECORD : Report	BITY, LENGO	well)	1	[48]
· ·			i ass afringe set in			
CASING SIZE WEIGHT, (B)	F	(Mid) HOLE	SIZE		NO RECORD	AMOUNT PULLED
8-5/8 WEIGHT 18/		-	SIZE			AMOUNT PULLED
and the second of the second o	4/2	FT. 12-1/	SIZE /4.i	CEMENTI 350 BAC	KS.	Nois.
8-5/8	14.7 244.5	FT. 12-1/	/4" /8 1st	390 BAC	ensured s/3	None
8-5/8 3/ 5-1/2 15.5 or cever	14.7 244.5	FT. 12-1/ FT. 7-1/	/4" /8 1st	390 BAC	ensured s/3	None.
8-5/8 0/ 5-1/2 15.5 or cever	1/27 2/45 at. Stage G	FY. 12-1/ FT. 7-2/ OLLAR SET AT	/4" /8 1st	350 BAC STAGE C	KS SMEHTED 8/3 D 8/330 CU.	50 cu. st.
8-5/8 0/ 5-1/2 15.5 or cever	LLT DIAS OF STAGE CO	FY. 12-1/ FT. 7-2/ OLLAR SET AT	812E /4: /8 181 r 1204 Fr.	350 BAC E STAGE C CEMENTS 30.	ms when e/3 n e/330 cu.	FOOD CONTRACT. PACKER SET (MD)
8-5/8 7/ 5-1/2 15.5 OF CEUE	DAA5 DY STAGE G	FY. 12-1/ FT. 7-2/ OLLAR SET AT	SIZE /4: /8 1st r 1204 FF.	SIZE	TUBING RECORD DEPTH SET (MD)	FOR CONTRACT (MD)
8-5/8 5-1/2 15.5 OF CEVEL NIZE 10P (MD)	LIT STAGE CONTROL (May 8 see and number)	FY. 12-1/ FI. 7-1/ OLLAR SET AT	SIZE /4: /8 1st r 1204 FF.	SIZE D. SHOT, FRA	TI'BING RECORDED SET (MD) LUE. 2248 CTURE, CEMENT	FACKER SET (MD) SQUEEZE, ETC.
8-5/8 5-1/2 15-5 OF CELET NIZE 100 (MD) PERFORATION RECORD (Intritut no)	LINTE LEGISTIC SE and number)	FY. 12-1/ FI. 7-1/ OLLAS SET AN	SCREEN (MD) SCREEN (MD) 32. ACI DEPTH INTERVAL	STAGE CEMENTS STAGE	DENTED \$/3 D \$/330 CU. TUBING RECOR DEPTH SET (MD) U.E. 2248 CTURE, CEMENT AMOUNT AND KIND	PACKER SET IMD) PACKER SET IMD) SQUEEZE, ETC. OF MATERIAL USED
8-5/8 5-1/2 15.5 OF CEVER	LINTE LEGISTIC SE and number)	FY. 12-1/ FI. 7-1/ OLLAS SET AN	SCREEN (MD) SCREEN (MD) 32. ACI DEPTH INTERVAL	STAGE CEMENTS STAGE	TI'BING RECORDED SET (MD) LUE. 2248 CTURE, CEMENT	PACKER SET IMD) PACKER SET IMD) SQUEEZE, ETC. OF MATERIAL USED
8-5/8 5-1/2 15.5 OF CELET	LINTE LEGISTIC SE and number)	FY. 12-1/ FI. 7-1/ OLLAS SET AN	SCREEN (MD) SCREEN (MD) 32. ACI DEPTH INTERVAL	STAGE CEMENTS STAGE	DENTED \$/3 D \$/330 CU. TUBING RECOR DEPTH SET (MD) U.E. 2248 CTURE, CEMENT AMOUNT AND KIND	PACKER SET IMD) PACKER SET IMD) SQUEEZE, ETC. OF MATERIAL USED
8-5/8 5-1/2 15.5 OF CELET NIZE FOR IND PERFORATED 4 SHOTS/I TOTAL OF 3 HOLES.	LINTE LEGISTIC SE and number)	FY. 12-1/ FI. 7-1/ OLLAS SET AN	SCREEN (MO) SCREEN (MO) S2. ACI LEPTH INTERVAL	STAGE CEMENTS STAGE	DENTED \$/3 D \$/330 CU. TUBING RECOR DEPTH SET (MD) U.E. 2248 CTURE, CEMENT AMOUNT AND KIND	PACKER SET IMD) PACKER SET IMD) SQUEEZE, ETC. OF MATERIAL USED
8-5/8 5-1/2 15.5 OF CELET NIZE FOR IND. PERFORATION RECORD (Intercut. #L PERFORATED 4 SHOTS/1 TOTAL OF 3 HOLES.	LINTE LECTOR DE LATE COMMENTE SE and number) FT. 2276 + 2 LAS HOLE	FY. 12-1/ FI. 7-2/ OLLAR SET AT ACKN CEMENT' 1206 FY. 226 FY. 212E.	SCREEN (MO) SCREEN (MO) S2. ACI LEPTH INTERVAL 227,6-2396	SIZE D. SHOT, FRA (MD)	TUBING RECORD DEPTH SET (MD) U.E. 2248 CTURE, CEMENT AMOUNT AND KIND CAL "-1/"	FACKER SET IMD) FACKER SET IMD) SQUEEZE, ETC. OF MATERIAL CSED ATCS (Producing or
8-5/8 5-1/2 15.5 OF CELET NIZE POPULATION RECORD (Intercut. AL PERFORATED 4 SHOTS/I TOTAL OF 3 HOLES.	LINTE DEAGE CONTROL STAGE CONTROL (May 8 See and number) FT. 2276 - 2 C. 45 HOLE	FY. 12-1/FY. 7-2/OLLAR SET AT	SIZE /4: /8 1sor 1204 Fr. SCREEN (MO) 32. ACI LEPTH INTERVAL 227,6-2296 CTION pino—size and ty	SIZE D. SHOT, FRA (MD) FF. 25	TUBING RECORDED TO BIND RECORDED TO BE TO MADE TO BE TO MADE TO BE	FACKER SET IMD) FACKER SET IMD) SQUEEZE, ETC. OF MATERIAL CSED ATCS (Producing or
8-5/8 5-1/2 15.5 OF CELET NIZE FERFORATION RECORD (Intercut. FOR TOTAL OF 3. HOLES. 3.* ATE FIRST PRODUCTION	LINTE DEAGE CONTROLLES OF AN AUTOM (May 8) Se and number) FT. 2276 + 2 1.45 HOLE	FY. 12-1/FY. 7-2/OLLAR SET AT	SCREEN (MO) SCREEN (MO) S2. ACI LEPTH INTERVAL 227,6-2396	SIZE D. SHOT, FRA (MD)	TUBING RECORD DEPTH SET (MD) U.E. 2248 CTURE, CEMENT AMOUNT AND KIND CAL "-1/"	FACKER SET IMD) FACKER SET IMD) SQUEEZE, ETC. OF MATERIAL CSED ATCS (Producing or
8-5/8 5-1/2 15.5 OF CELET NIZE FERFORATION RECORD (Intercut. FOR TOTAL OF 3- HOLES. ATE FIRST PRODUCTION	LINTE INTEGRAL STAGE CONTROL (May 8 See and number) FT. 2276 - 2 (CTION METHOD (FIG.) CHOKE SIZE ALC MOULE	PROD'N. FOR	SIZE /4: /8 1sor 1204 Fr. SCREEN (MO) 32. ACI LEPTH INTERVAL 227,6-2296 CTION pino—size and ty	SIZE D. SHOT, FRA (MD) FF. 25	TUBING RECORDED TO BIND RECORDED TO SET (MO) LUE 228 CTURE, CEMENT AMOUNT AND BIND CAL 11/1	FACKER SET IMD) FACKER SET IMD) SQUEEZE, ETC. OF MATERIAL CSED ATCS (Producing or
S-5/8 5-1/2 15.5 OF CELET OF CELET OF CELET OF CELET OF TEST PRODUCTION PRODUCTION PRODUCTION PRODUCTION ATE OF TEST HOURS TESTED LOW. TUBING PRESSION	LINTER RECORD STAGE CONTROL OF STAGE CONTROL (MG) S SE and number) TT. 2276 - 2 LO MOLE CHOKE SIZE CHOKE SIZE CHOKE SIZE CHOKE SIZE CHOKE SIZE	PROO'N, FOR TEST PERIOD	SIZE A: 18: 18: 19: 19: 19: 19: 19: 19	CONENTI 350 SACE CEMENTS 50. SIZE 2-3/8 [D. SHOT, FRA (MD) FF. 25 pc of pump) GAS - MCF.	TUBING RECORDED TO BIND RECORDED TO SET (MO) LUE 228 CTURE, CEMENT AMOUNT AND BIND CAL 11/1	PACKER SET IMD) PACKER SET IMD) SQUEEZE, ETC. OF MATERIAL USED ATUS (Producing or n) Seast 121
S-5/8 5-1/2 15.5 OF CELET NIZE FOR CELET NIZE FOR CHAPTER NIZE CANING PRESSION	LINTER RECORD STAGE CONTROL OF STAGE CONTROL (MG) S SE and number) TT. 2276 - 2 LO MOLE CHOKE SIZE CHOKE SIZE CHOKE SIZE CHOKE SIZE CHOKE SIZE	PROO'N, FOR TEST PERIOD	SIZE A: 18: 18: 19: 19: 19: 19: 19: 19	CONENTI 350 SACE CEMENTS 50. SIZE 2-3/8 [D. SHOT, FRA (MD) FF. 25 pc of pump) GAS - MCF.	TUBING RECORDED TO BIND RECORDED TO SET (MO) LUE 228 CTURE, CEMENT AMOUNT AND BIND CAL 11/1	PACKER SET IMD) PACKER SET IMD) SQUEEZE, ETC. OF MATERIAL USED ATUS (Producing or n) Seast 121
8-5/8 5-1/2 15.5 OF CELET NIZE FERFORATION RECORD (Intercut, so PERFORATED 4 SHOTS/I TOTAL OF 3 HOLES. 3.* ATE FIRST PRODUCTION PRODU	LINTER RECORD STAGE CONTROL OF STAGE CONTROL (MG) S SE and number) TT. 2276 - 2 LO MOLE CHOKE SIZE CHOKE SIZE CHOKE SIZE CHOKE SIZE CHOKE SIZE	PROO'N, FOR TEST PERIOD	SIZE A: 18: 18: 19: 19: 19: 19: 19: 19	CONENTI 350 SACE CEMENTS 50. SIZE 2-3/8 [D. SHOT, FRA (MD) FF. 25 pc of pump) GAS - MCF.	TUBING RECORDED TO BIND RECORDED TO SET (MD) LE 2248 CTURE, CEMENT AMOUNT AND BIND WELL ST Shul-i WATER SOL	PACKER SET IMD) PACKER SET IMD) SQUEEZE, ETC. OF MATERIAL USED ATUS (Producing or n) Seast 121
S-5/8 5-1/2 15.5 OF CELET OF CEL	CHOKE SIZE	PROD'N, FOR TEST PERIOD	SCREEN (MO) 32. ACI LEPTH INTERVAL 227, C-2396 CTION ping—size and ty GAS—MCF.	CEMENTI 350 BAC ESTAGE C CEMENTI 30. SIZE 2-3/8 F O. SHOT, FRA (MD) FF. 25 pe of pump) GAN-MCF. WAT	TUBING RECORD DEPTH SET (MD) LE 2248 CTURE, CEMENT AND KIND WELL ST Shul-i WATER BB. 0	PACKER SET IMD) PACKER SET IMD) SQUEEZE, ETC. OF MATERIAL USED TATUS (Producing or IN) SAMPLE IN INC.
S-5/8 5-1/2 15.5. OF CELET NIZE	LINTER RECORD DE LOUIS RECORD (MO) S SE AND RETHON (MO) S SE AND RETHON (FIG. 1976 - 2 LES MOLE CHOKE SIZE LINTER RECORD S LINTER RECORD S CHOKE S LINTER RECORD S LINTER RE	PROD'N, FOR TEST PERIOD	SCREEN (MO) 32. ACI LEPTH INTERVAL 227, C-2396 CTION ping—size and ty GAS—MCF.	CEMENTI 350 BAC ESTAGE C CEMENTI 30. SIZE 2-3/8 F O. SHOT, FRA (MD) FF. 25 pe of pump) GAN-MCF. WAT	TUBING RECORD DEPTH SET (MD) LE 2248 CTURE, CEMENT AND KIND WELL ST Shul-i WATER BB. 0	PACKER SET IMD) PACKER SET IMD) SQUEEZE, ETC. OF MATERIAL USED TATUS (Producing or IN) SAMPLE IN INC.
S-5/8 5-1/2 15.5 OF CELET OF CEL	LINTER RECORD DE LOUIS RECORD (MO) S SE AND RETHON (MO) S SE AND RETHON (FIG. 1976 - 2 LES MOLE CHOKE SIZE LINTER RECORD S LINTER RECORD S CHOKE S LINTER RECORD S LINTER RE	PROD'S, FOR TEST PERIOD	SCREEN (MO) 32. ACI LEPTH INTERVAL 227, C-2396 CTION ping—size and ty GAS—MCF.	CEMENTI 350 BAC ESTAGE C CEMENTI 30. SIZE 2-3/8 F O. SHOT, FRA (MD) FF. 25 pe of pump) GAN-MCF. WAT	TUBING RECORD DEPTH SET (MD) LE 2248 CTURE, CEMENT AND KIND WELL ST Shul-i WATER BB. 0	PACKER SET IMD) PACKER SET IMD) SQUEEZE, ETC. OF MATERIAL USED TATUS (Producing or IN) SAMPLE IN INC.

Form 9-310 (Rev. 5-68)

UNITED STATES

SUBMIT IN DUPLICATE*

Form approved. Budget Bureau No. 42-R355.5.

DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

(See other instructions on reverse side)

Budget Bureau No. 42-R355.5.

5. LEASE DESIGNATION AND SERIAL NO.

	185 15200/
0 6*	8. IF INDIAN, ALLOTTEE OR TRIBE NAME
ACE.	7. UNIT AGREEMENT NAME
	S. FARM OR LEASE NAME

WELL CO	MPLETION	OR RECC	MPLETION I	REPORT. AN	HD LOG*	O. IS INDIAN, AL	LUTTER OR TRIBE RAY
a TYPE OF WEI	LL: OII	GAS WELL	DRY .	Other Gas	STERME	7. UNIT AGREEM	ENT NAME
b. TYPE OF COM		EP- PLUG	DIFF.			S. FARM OR LEA	(
WELL E	OVER LE	BACK	L RESVE.	Other		SAN YET	
	LUNION GAS	a Coursemy				9. WELL NO.	
ADDRESS OF OPE						4	
P. O. Ba	ME 808, FAS	windron,	FER SEXICO E	risot		1	OOL, OR WILDCAT
LOCATION OF WE	ILL (Report local	ion clearly and is	accordance with an	W Beath registress	heren Bours	BILDEAY	
At surface	FIZ FI. FRE	_	- زام - ا	2 2 3 2 3 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3		OR AREA	I., OR BLOCK AND SURVE
	terval reported b		AS ABOVE	MAY 10 1			7.4强, R-1E,
At total depth	SAME AS	APIONE	14. PERMIT NO		K VIINTINO	12. COUNTY OR	13. STATE
			OIL	CON LINOS	ú 1820≱D	. PARISH	
. DATE SPUDDED	16. DATE T.D.	REACHED 17. D.	ATE COMPL. (Ready t	o prod.) 18. Er.	EVATIONS (DF. REE	SALEGRAL	BLEV. CARINGHEAD
EB. 7, 197			EDBUMN 17,		956 PT. R.	K.B.	5843 JT.
TOTAL DEPTH, MD	& TVD 21. PI	UG, BACK T.D., MD	a TVD 22. IF MUI	TIPLE COMPL.	23. INTERVALS	ROTARY TOOLS	CABLE TOOLS
475 FY. W	a TWD a	(38 m. 90	a Typ			C-2475 F	7
PRODUCING INTE	RVAL(8), OF THE	& TVD AND	OP, BOTTOM, NAME (MD AND TVD)*			25. WAS DISECTIONAL SURVEY MADE
CASING SIZE	WHIGHT, LE	M., South CA	SING RECORD (Reg			G RECORD	AMOUNT PULLED
8-5/8"	23_04		70 FT. 12	4/4	350 sac	tca	See.
5-4/2	15,50	/ as	26 07. 7	9/80	IN STAGE C	EMENTED BY	OO CHE EF.
	OF CENT	ny. Syman	COLLAR DET				. TT. OF CENE
•		LINER RECOR	<u> </u>		30.	MURENC PROOPS	
SIZE	TOP (MD)	BOTTOM (MD)	BACES CEMENTS	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			2-3/8" E		
					2-3/6 50	- SIGN PIA	
PERFORATION RE	COED (Interval,	else and number)		32. A	CID, SHOT, FRA	CTURE, CEMENT SO	QUEEZE, ETC.
				DEPTH INTERV	AL (MD)	AMOUNT AND KIND O	F MATERIAL USED
		/FT. 2000	- 2200 FT.	2260 -	220 FY.	250 pag. 7-1	/2" HEL MID.
TOTAL OF	SO MOLES.	大学 中心	C-48:				:
		31 813 8				- 	
•		A 19 19 19 19 19 19 19 19 19 19 19 19 19	PRO	DUCTION			
TE FIRST PRODUCT	TION PRO		(Favoine, gas lift, p		type of pump)	WELL STA	TUB (Producing or
TE OF TEST	HOURS TESTER	CHOKE BI	OM PROD'N. BOB	Colif Metr.	GAS MCF.	WATER-BEL	TOTAL WAY
House		OIL CON.	TEST PROPERTY	1 0			
W. TURNS PRESS.	CASING PRESS		·_	VATI 8 ITAN	2 WATE	R—BBL. OII	TORAVITY-API (CORE.)
DISPOSITION OF	GAS (Bold, used fo	or fuel, vented, et	•		<u> </u>	TEST WITNESSED	BX
LIST OF ATTACH	VENTO			<u>GEGLOGICAL Si</u>			
07 211200		_		DURANJO, COEC	<i>)</i> .		
	iginal signed b	y	information is comp	lete and correct a	as determined from	m all available recor	ds
	BERT D. NOLA		TITLE	Barra St		DATE	Stan 8 1092
G ₁₄	BERT D. B	OLAND, IR.		Dailling St	SPECIAL TOTAL PARTY.	DATE _	Vav 8, 1972

*(See Instructions and Spaces for Additional Data on Reverse Side)

UNITED STATES SUBMIT IN DUPLICATE. DEPARTMENT OF THE INTERIOR

Form approved. Budget Bureau No. 42-R355.5.

Secother Instructions on 5 LEASE DESIGNATION AND SERIAL NO.

	GE							
WELL CO	MPLETION C	OR RECOM	PLETION	REPORT	AND LO	G *	6. IF INDIAN,	ALLOTTEE OF TRIBE NAM
TYPE OF WEL	WELL	GAS WELL	DRY	OtherG	AG STORAG	6	7. UNIT AGRE	
NEW XX	WORK DEEP-	DACK D	DIFF. DESVR.	Other			S. PARM QR	PAR GAS SPERAS
AME OF OPERAT							9. WELL NO.	Value O
DDEESE OF OPE	UNION CAS C			· · · · · · · · · · · · · · · · · · ·				5
P. O. Bos	L (Report location of	clearly and in ac	cordance with	87451	irementa)*			D POOL, OR WILDCAT
) FT. FROM T					1942.	11. SEC., T., F	R., M., OR BLOCK AND BURYE
	erval reported below	SAME AS	ABOVE.				Sec. 2)	T-45%, R-1E,
it total depth	SAME AS AS	OME	14. PERMIT :	NO.	DATE ISSUED		12. COUNTY C	
			1				PARISE SOUDONA	Con Maxic
ATE SPUDDED	16. DATE T.D. REAC			y to prod.)	8. ELEVATIONS (T, GR. ETC.)*	19. BLEV. CASINGHEAD
OTAL DEPTH, MD		ACK T.D., MD & T	1 HOW	ULTIPLE COMPL	, 28. IN:	TERVALS ILLED BY	ROTARY TOO	LS CABLE TOOLS
RODUCING INTER	VAL(8), OF THIS CO.	FT. 40 a	BOTTOM, NAME	(MD AND TVD)	•		0- 3(5) F1	25. WAS DESCRIONAL
	316 rr. 131 à					,		SUBVET MADE
	·							27. WAS WELL CORBD
THE BLECTRIC A								21, WAS WELL COMBU
	ND OTHER LOGS RUN					- Dasm		Ma
Libuction		- Promise		A series	One Con 100	r Boso		ib.
		PERMIT	G RECORD (A		rs set in soell)	R BOOKS		AMOUNT PULLED
	OF LECTURE	PERMIT	(MD)	e-port all string	rs set in soell)		REFORD	AMOUNT PULLED
	OF LECTURE	PERMIT	(MD)	report all string	rs set in soell)		REFORD	
	WEGHT, LB./FT.	CASIN DEPTH SET	(MD)	report all string	350	EACKS OR CENT	ENSED N	Mount Pulled
CABING SIZE 3-5/10 5-1/12	WEIGHT, LB./FT.	PERMIT	(MD)	report all string	rs set in soell)	BACKS OR CEA D C/40	ENSED W	MOUNT PULLED House 370 CO. FT. OF
	WEIGHT, LB./FT.	CASIN DEPTH SET	(MD)	report all string	30. 8172	BACKS OR CEA D C/40	ENSED N	MOUNT PULLED House 370 CO. 57. OF
CABING SIZE	WEIGHT, LB./FT.	CASIN DEPTH SET	(MD)	report all string	360 STA 200 STA 200 STA 200 STA 200 STA 200 STA	EMPATING T	UBING RECO	MOUNT PULLED House 370 CU. 57. CS
SIZE SIZE SIZE SIZE	WEIGHT, LB./FT. 24.00 15.00 LIT TOP (MB) Be	CASIN DEPTH SET 464 F 2464 F COLL NER RECORD TOM MD) S and number)	IG RECORD (A (MD)	SCREEN ()	360 STA 200 STA 200 STA 200 STA 200 STA 200 STA	T, FRACTU	UBING RECO	AMOUNT PULLED Home 370 CM FT - OF ORD ORD PACKER SET (MD)
SIZE SIZE SIZE CONTROL REC	WEIGHT, LB./FT. 24.03 15.50: DISTOR (MB) DED (Interval, size of the content o	CASIN DEPTH SET 464 F 2464 F COLL NER RECORD TOM MD) S and number)	IG RECORD (A (MD)	SCREEN ()	30. (D) 8122 AGID, SHO'	T, FRACTU	UBING RECO	AMOUNT PULLED AMOUNT PULLED ORD PACKER SET (MD) PACKER SET (MD)
SIZE SIZE SIZE CITAL OF G	WEIGHT, LB./FT. 24.03 15.50: DISTOR (MB) DED (Interval, size of the content o	CASIN DEPTH SET 464 F 2464 F COLL NER RECORD TOM MD) S and number)	IG RECORD (A (MD)	SCREEN ()	30. (D) 8122 AGID, SHO	EMENTING I	UBING RECO	AMOUNT PULLED AMOUNT PULLED ORD PACKER SET (MD) PACKER SET (MD) PACKER SET (MD) OF MATERIAL CEED
SIZE SIZE CITAL OF G	WEIGHT, LB/FT. 24. CO. 15. GC. TOP (MB) BO CORD (Interval, size of the control of the contro	CASIN DEPTH SET 464 F 2464 F COLL NER RECORD TOM MD) S and number)	IG RECORD (A (MD)	SCREEN () 82. DEPTH IN	30. (D) 8122 AGID, SHO	EMENTING I	UBING RECO	AMOUNT PULLED AMOUNT PULLED ORD PACKER SET (MD) PACKER SET (MD) PACKER SET (MD) OF MATERIAL CEED
SIZE SIZE SIZE CONTACTOR COTAL OF G.	WEGHT, LB./FT. 24.03 15.50: TOP (MB) BO CORD (Interval, size of the cord) CORD (Interval, size of the cord) CORD (Interval, size of the cord)	CASIN DEPTH SET 464 F 2464 F COLL NER RECORD TOM MD) S and number)	IG RECORD (A (MD)	SCREEN IN	30. AGID, SHO	T. FRACTI	UBING RECO	AMOUNT PULLED HOME ORD ORD PACKER SET (MD) P SQUEEZE, ETC. D OF MATRIAL CRED HUL AND
SIZE SIZE SIZE SIZE SIZE SIZE FERFORATION REC CYAL OF 3 ALL WILE FIRST PRODUCT	WEIGHT, LB./FT. 24.03 15.50: TOP (MB) Bo ORD (Interval, size of the control o	CASINDEPTH SET LAGICAL NER RECORD OTTOM MD) S and number) ZZXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	PROWING, gas lift,	SCREEN IN SCREEN	AGID, SHO	EMENTING I	UBING RECO	AMOUNT PULLED HOW FIND ORD PACKER SET (MD) SQUEEZE ETC. D OF MATERIAL CEED
SIZE SIZE SIZE SIZE CTAL OF G. J. WILE PIRST PRODUCT	WEGHT, LB./FT. 24.03 15.50: TOP (MB) BO CORD (Interval, size of the cord) CORD (Interval, size of the cord) CORD (Interval, size of the cord)	CASIN DEPTH SET 464 S 2454 SS COLL. NER RECORD (TIOM MD) S and number)	IG RECORD (A (MD)	SCREEN ()	30. AGID, SHO	EMENTING I	UBING RECO	AMOUNT PULLED HOWER ON FROM
SIZE SIZE SIZE SIZE SIZE PERFORATION REC CITAL OF G. ALL HOLE PIRST PRODUCT	WEIGHT, LB./FT. 24.03 15.50: TOP (MB) Bo ORD (Interval, size of the control o	CASINDEPTH SET LAGICAL NER RECORD OTTOM MD) S and number) ZZXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	PROD'N. FOR	SCREEN ()	ACID, SHO	EMENTING I	UBING RECO	AMOUNT PULLED HOWER ON PACKER SET (MD) PACKER SET (MD) PACKER SET (MD) AND PACKER SET (MD) AND PACKER SET (MD) PACKER SET (MD) AND PACKER SET (MD) PACKER SET (MD) AND PACKER SET (MD) PACKER SET (MD)
SIZE SIZE SIZE SIZE CONTROL OF GRAPH OF GRAPH OF GRAPH OF GRAPH OF GRAPH OF GRAPH OF TREE OF T	WEIGHT, LB./FT. 24.03 15.50: TOP (MD) BOOLES CHOTS/FT. HOLES. GIZE ROURS TESTED	CASIN DEPTH SET JAGA ST JAGA ST JAGA ST JAGA ST JAGA ST LOCAL NER RECORD FIOM MD) GAND GAND CHOKE SIZE CALCULATED 24-HOUR BATE	PROD'N. FOR TEST PERIOD	SCREEN 13	ACID, SHO	T. FRACTU	UBING RECO	AMOUNT PULLED HOME ON FI OF ON FI
SIZE SIZE SIZE SIZE CHI ORATE: CTAL OF G. JE WILE PIRST PRODUCT: OF TEST DISPOSITION OF G.	WEIGHT, LB./FT. 15. G. 15. G. TOP (MD) DOED (Interval, size of the control of	CASIN DEPTH SET JAGA ST JAGA ST JAGA ST JAGA ST JAGA ST LOCAL NER RECORD FIOM MD) GAND GAND CHOKE SIZE CALCULATED 24-HOUR BATE	PROD'N. FOR TEST PERIOD	SCREEN 13	ACID, SHO	T. FRACTU	UBING RECO DEPTE SET (M) URE, CEMENT OUNT AND KING WATER HBU.	AMOUNT PULLED HOME ON FILE ON PACKER SET (MD) P SQUEEZE, ETC. D OF MATERIAL CRED HULL AND BETATUR (Producing or Sen) SALES HIS
SIZE SIZE SIZE SIZE SIZE CIT (NATE: CTAL OF G. J.C. WILE FIRST PRODUCT: OP TEST DISPOSITION OF G.	WEIGHT, LB./FT. 15. G. 15. G. LIT TOP (MB) BO ORD (Interval, size of the control of the con	CASIN DEPTH SET JEST STATE COLL. NER RECORD FIOM MD) S and number) CHOKE SIZE CALCULATED 24-HOUR BATE el, vented, etc.)	PROD'N. FOR TEST PERIOD	SCREEN 13 SCREEN	ACID, SHO' TERVAL (MD) Gand type of pu	T FRACTI ANG SOCIAL WATER	UBING RECO EPTH SET (M) URE, CEMENT OUNT AND KING WATER HBL. TEST WITTER	AMOUNT PULLED HOME ON FILE ON PACKER SET (MD) P SQUEEZE, ETC. D OF MATERIAL CRED HULL AND BETATUR (Producing or Sen) SALES HIS
SIZE	WEIGHT, LB./FT. 15. G. 15. G. TOP (MD) DOED (Interval, size of the control of	CASIN DEPTH SET 24.51.53 CASIN DEPTH SET 24.51.53 CASIN MER RECORD OTTOM MDD S and number) CHOKE SIZE CALCULATED 24-HOUR BATE cl, vented, etc.)	PROD'N. FOR TEST PERIOD	SCREEN 13 SCREEN	ACID, SHO' TERVAL (MD) Gand type of pu	T FRACTI ANG SOCIAL WATER	UBING RECO EPTH SET (M) URE, CEMENT OUNT AND KING WATER HBL. TEST WITTER	AMOUNT PULLED HOME ON FILE ON PACKER SET (MD) P SQUEEZE, ETC. D OF MATERIAL CRED HULL AND BETATUR (Producing or Sen) SALES HIS

Porm \$4336 Rev. 5-65)	JNITED S	TATES	SUBMIT IN	DUPLICATE	Fi F	orm approved. udget Bureau No. 42/R855.5.
	MENT OF			(See other struction reverse s	rin-	IGNATION AND SERIAL NO.
GE	OLOGICAL	SURVEY				18-0001-12395
WELL COMPLETION C	R RECOMP	LETION R	EPORT AN	D LOG	s. IF INDIAN.	ALLOTTEE OR TRIBE NAME
L. TYPE OF WELL: OIL WELL	GAS CONTRACT	DRY	Other GAS ST	ORAGE	7 UNIT ACRE	
b. TYPE OF COMPLETION: NEW WOLK OVER PER	PLES D	DIFF ESVR	Other			PAS GAS STORAGE
2. NAME OF OPERATOR					SA	N YaiDRO
SOUTHERN UNION GAS CO	MPANY			····		6
P. O. Box 808, FARMID	IGTON, NEW N	EXICO 87	7401	(fa) •		D POOL, OR WILDCAT
At surface 625 FT./HORTH L	INE & 1420'	WEST LIE	Æ.	,	11. SEC., T., 5	A., M., OR BLOCK AND SURVEY
At top prod. interval reported below	SAME AS A	3708			SEC. 20,	, T-15N, R-1E
At total depth SAME AS ABO			** ** ***			A.P.M.
			1		PARISH .	Mew Mey LCO
12/28/73 1/6/74	1/8		prod) 15. ELE			5722 FT.
0. TOTAL DEPTH, MD & TVD 21. PLUG. I	AGK T.D , MD & TVD	22. IF MULT	TIPLE COMPL.,	23. INTERV		LS CABLE TOOLS
2480' MD & TVD 2435' A PRODUCING INTERVAL(S): OF THIS (O	MD & TVD	F V VIVE (V	D AND TYPLY		0-2480	FT.
2208 - 2228 Fr. MD &			D AND LYDY			SURVEY MADE
3. TYPE EVECTRIC AND OTHER LOGS RES						27. WAS WELL CORED
INDUCTION-ELECTRIC, DE	NSITY, GAMM	-RAY NEE	TRON, CEMEN	IT BOND		YES
	10 - 20 - SET - (A			(EMEN	TING RECORD	AMOUNT PULLED
8-5/8" 28.0#	404 FT	12-	1/4*	325 BAC		None
5-1/2" 15.50# CEMENT. STAGE COL						350 CU. FT. OF
LI	NER RECORD	<u> </u>		30.	TUBING RECO)RD
RIZE TOP (MD) H	MIGHT IND) SAC	RR CEMENTS	STREEN (MI)	SIZE	DEFTH BET (M)	
- La cale de la cale de	سي أسيري والمدالي			2-3/8"	BUE1044_	ET -
PERFORATED 4 SHOTS/FT.		T•	32. AC		AMOUNT AND RIN	SQUEEZE, ETC.
TOTAL OF 80 HOLES.						
			!			
ATE FIEST PRODUCTION PEr con	JON METHOD - Flyar		OUCTION mping size and	type of pump)	WEL:	NTATUS Producing or
TE OF TEST HOURS TESTED		PROD'N. FOR TENT PERIOD	onBBL	GAS - VCF	WATER ABL	SHUT IN STORAGE
OW. TURING PRESS. CANING PRESS RL	CALCS NATED 24-HOS R RATE ;	orte BBL	100 NOF		ATER BELL	OC MEAVITY-API (CORE.)
1. DISPOSITION OF GAS (Notd, used for fu	el, vented, etc.)				Trest with	BID BY
5. LIST OF ATTACHMENTS						A108 - 312 -
6. I hereby certify that the foregoing original signed by	red attached uit er	aath a' ta ee s	ere in the ormet is	s de te finale et	er im air svalidelika	WILL SON SOM
SIGNED Dan R. Coiller			OFFICE MAI		DATE	The second second

*(See Instructions and Spaces for Additional Data on Reverse Side)

IA TYPE OF WELL:

2. NAME OF OPERATOR

3. ADDRESS OF OPERATOR

At total depth

L TYPE OF COMPLETION:

LINITED STATES DEPART

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

P. O. Box 808, Farmington, New Mexico 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements).

At surface 1089 FT./South LINE & 1703 FT./WEST LINE.

NEW WORK DEEP- PLUG DACK OVER EN BACK

At top prod. interval reported below Saar An ACCUE

24.231 NO & TVD 2377 FT. NO & TVD

SOUTHERN UNION GAR COUPANY

UNITED STATES	(See other
MENT OF THE INTERIOR	structions reverse sig
GEOLOGICAL SURVEY	

UNITED STATES	SUBMIT IN DUPI	i B	orm approved. oudget Bureau No. 42-R355.5.
DEPARTMENT OF THE INGEOLOGICAL SURVE	NTERIOR :	everse sider	IGNATION AND SERIAL NO.
MPLETION OR RECOMPLETION		A IP INDIAN	ALLOTTEE OR TRIBE NAME
L: OH GAS DORT		7. UNIT AGRE	EMENT NAME
PLETION: WORK DEEP- DEEG DIFF. DAVK RESVE	Other	LAS BIL	PAS GAS STORAGE
on		Saa 9 WELL NO.	Yerzno
UNIOR GAS COMPANY			7
1 808, FARMINGTON, NEW VEXICO	any State requirements)*	10. FIELD ANI	POOL, OR WILDCAT
9 FT./SOUTH LINE & 1703 FT./WE			M OR BLOCK AND BURVEY
SAME AS ABOVE		Sec. 20, N.M.	T-158, R-1E P. H.
14 PEALLS	NO. SOME ISSUED	PARISH	
The cold to accoming the body sufficiency	to prod.) 18. ELEVATION	SASTIONAL STATE OF RESERVE	19 ELEV. CASINGHEAD
1/15/74 1/18/74 TVD 21 PLUG BACK T.D., MD 4 TVD 22 IF M	#330 PETIPLE COMPL , 23,	FT. D.F.	S CABLE TOOLS
D 2377 FT. 10 4 TVD HOW	MANT*	DRILLED BY 0_2/23	
VALUED, OF THIS COMPLETION-TOP, BUTTOM, NAME	(MD AND TVD)"	•	25. WAS DIRECTIONAL SURVEY MADE
190 FT. NO & TVD AQUA ZARCA			110
LECTRICAL, DENSITY, GAMMA-RAY	Nurveon, Crasser	Bana	27. WAS WELL CORED
CASING RECORD (E	'eport all strings set in well)		
and the second s	2-1/4" 325	RACKS	AMOUNT PULLED
15.50 2422 FT. 3 STAGE COLLAR SET AT 1215 FT.	7-7/8" 1st s R.K.B. 2000 stac	TAGE COMENTED W/450	390 CU. FT. OF COM
TOP (MD) BOTH MD SACKS CEMENT	SCREEN (MD) SI	TUBING RECO	
	2-3/	8 EUE 2180 FT	
(60) (Interval, eize and number)	82 ACID. SH	OT. FRACTURE, CEMENT	SQUEEZE, ETC.
4 SHOTS/FT. 2270 - 2290 FT.	DEPTH INTERVAL (MD)	AMOUNT AND KIND	OF MATERIAL USED
SIZE.	1 		

24. PRODUCING INTERVAL(S), OF THIS COMPLETION -- TOP, BUTTOM, NAME (MD AND TVD) 2270 - 2290 FT. MD & TVD AQUA ZARCA 26. TYPE ELECTRIC AND OTHER LOOK RUN INDUCTION-ELECTRICAL, DENGITY, GARMA-RAY NULYRON, COMENT BON CASING RECORD (Report all strings set in well) CASING SIZE WEIGHT, 18 FT DEPTH SET (MIG) in. I. Size 12-1/4" B-5/8 28.0# 486 FT. 7-7/8" 1ar stag 5-1/2" 15.50# 2422 FT. CEMENT. STAGE COLLAR SET AT 1215 FT. R.K.B. 200 STAGE C LINER RECORD BOLIGHT MES SACKS CEMENTS SCREEN (MD) 31 PERFORATION EXCUED (Interval, eize and number) PERFORATED 4 SHOTS/FT. 2270 - 2290 FT. TOTAL OF 80 HOLES. 0.48" HOLE BIZE. 33 • FRODITER'S proof (2108 METHOD (Flowing, gue lift, pumping) -eize and type of pump DATE FIRST PRODUCTION CHOKE SIZE PROD'N FOR OIL - BBL. DATE OF TEST HOURS TESTED CASING PRESSURE CALCULATED OIL -- RBL. 24-HOUR RATE GAS-- MCF. 34. DISPOSITION OF GAS (Sold, used for fuel, rented, etc.) 35. LIST OF ATTACHMENTS 86. I bereby certify that he some Original signed by Dan R. Collier SIGNED __ The - January 23, 1974 - DEED OFFICE MANAGER DAN R. COLLIER

*(See Instructions and Spaces for Additional Data on Reverse Side)

WELL

At total depth

15. DATE SPUDDED

8/28/79

CABING SIZE

5/8"

5 1/2"

SIZE

SUBMIT IN DUPLICATE. Form approved. Budget Bureau No. 42-R855.5. UNITED STATES DEPARTMENT OF THE INTERIOR structions on reverse side) 5. LEASE DESIGNATION AND SERIAL NO. GEOLOGICAL SURVEY 14-08-0001-12395 6. IF INDIAN, ALLOTTER OR TRIBE NAME WELL COMPLETION OR RECOMPLETION REPORT AND LOG* 1a. TYPE OF WELL: Gas Storage GAS WELL 7. UNIT AGREEMENT NAME Other L TYPE OF COMPLETION: Las Milpas Gas Storage WORK _ DEEP-BACK DIFF. CESVS. S. FARM OR LEASE NAM Other 2. NAME OF OPERATOR San Ysidro 9. WELL NO. Southern Union Exploration Company 8 3. ADDRESS OF OPERATOR 10. FIELD AND POOL, OR WILDCAT Suite 1800, First International Bldg., Dallas, TX 75270 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* Storage 11. SEC., T., R., M., OR REOCK AND SURVEY OR AREA Sec 20, TI5N, RIE At top prod. interval reported below N.M. P.M. ÷ ... 12. COUNTY OR 14. PERMIT NO. DATE ISSUED 18. STATE Sandova1 NM -17. DATE COMPL. (Ready to prod.) 19. ELEV. CASINGHEAD 16. DATE T.D. REACHED 18. ELEVATIONS (DF. REB, BT, GR, ETC.)* 5829' GL F 5832 9/27/80 79 9/8/79 22. IF MULTIPLE COMPL., HOW MANY 23. INTERVALS DRILLED BY 21. PLUG, BACK T.D., MD & TVD BOTARY TOOLS CABLE TOOLS 2415' - X 24. PRODUCING INTERVAL(8), OF THIS COMPLETION-TOP, BOTTOM, NAME (MD AND TVD)* 25. WAS DIRECTIONAL SURVEY MADE 2243-2265' 1 SPF Aqua Zarca Yes 26. TYPE ELECTRIC AND OTHER LOGS BUN Induction Spherically Focused, Induction SFL, Compensated Neutron-Formation. No CASING RECORD (Report all strings set in soell) CEMENTING RECORD WEIGHT, LB./FT. DEPTH SET (MD) HOLE SIZE AMOUNT PULLED 24# 432.21' 12 1/4" 330 sks Class "B" Circulated 2445' 15.5# <u>7 7/8"</u> 1500' <u>lst Stage 360 sks</u> Class "C" 2nd Stage 450 sks Class LINER RECORD 30. TUBING RECORD TOP (MD) BOTTOM (MD) SACES CEMENTS SCREEN (MD) RIZE DEPTH SET (MD) PACKER BET (MD) ACID, SHOT, FRACTURE CENEVI SQUEEZE, ETC. 82. AMOUNT AND KIND OF MATERIAL DEED DEPTH INTERVAL (MD)

31. PERFORATION RECORD (Interval, size and number) 2243', 45', 51', 53', 55', 57', 59', 61', 63', 65' None

PRODUCTION PRODUCTION METHOD (Flowing, gas lift, pumping-eize and type of pump) No production Will produce by flowing DATE OF TEST HOURS TESTED CHOKE BIZE OIL-BBL. PROD'N. FOR TEST PERIOD FLOW. TUBING PRESS. CABING PRESECRE CALCULATED 24-HOUR RATE GAS-MCF. WATER-34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) Will be used as supply. 35. LIST OF ATTACHMENTS

36. I hereby centify that the foregoing and attached information is complete and correct as determined from all available records [1] [[[]]] BIGNED الريهس ا TITLE Drilling & Production Eng. PATR 2 1 1980 April 09, 1980

*(See Instructions and Spaces for Additional Data on Reverse Side)

MNOCC

By M& Zuchera

UNITED STATES

SUBMIT IN DUPLICATE* (See other inForm approved. Budget Bureau No 42-R355,5.

(pee other	
structions	on
reverse si	de)

	DEPAI		LOGICA			ERIO	ĸ	reverse		5. LEASE DE 14-08-0		non and serial no. -12395
WELL CO	MPLETIO	N OR	RECON	APLET	ION R	EPORT	AN	D LOG	*	8. IF INDIAN	, ALLO	TTEE OR TRIBE NAME
b. TYPE OF WEI b. TYPE OF COM NEW WELL 2. NAME OF OPERA SOUTHETH 3. ADDRESS OF OPE 1402 Fide 4. LOCATION OF WE	CL: (PLETION: WORK OVER INION GAS RATOR Lity Union LL (Report local)	DEEP.	PLUG DACK DACK TO HAND	Dir nes	F. SVR.	Other	Gas	Storage		8. FARM OR San Ysi 9. WELL NO.	LEASE Idro I-13	Gas Storage NAME
At surface 1: St At top prod. in	200. LOT	d 220.	LUT				Š	**************************************		OR AREA		OR BLOCK AND SURVEY
At total depth				14. PI	ERMIT NO.		DATE	ISSUED		12. COUNTY PARISH Sandov		13. STATE
15. DATE SPUDDED	16. DATE T.I	. REACHE	D 17. DATE	COMPL.	(Ready to	prod.) 1	8. ELEV	ATIONS (DF.	RKB, R1			ELEV. CASINGHEAD
6/23/75	6/30	/75		7/2/7	75		566	59 GL \$	5680	:4.18		5669
20. TOTAL DEPTH, MD 2459		241			HOW MA	g1e		23. INTERI		2459	LS	CABLE TOOLS
24. PRODUCING INTE 2181 ~ 22			ETION-TOP	BOTTOM	M) BKAK,	D AND TVD)*				2:	5. WAS DIRECTIONAL SURVEY MADE
	AND OTHER LO										27. W	VAS WELL CORED
CASING SIZE	WEIGHT,	T.B./FT.	CASI DEPTH SE			ert all strin	gs set i		NTING R	RECORD		AMOUNT PULLED
	_]	(30)	-		7.					
<u>8.5/8</u>	24# 4	32#	422 2459			1/4 7/8		60 sks (s s class	R	circulated
5 1/2		-31				119				ks class		cement
DV Tool	set 0 116		R RECORD	ent c	irculat	ted to				UBING REC		circulated
SIZE	TOP (MD)	BOTT	OM (MD)	SACES C	EMENT*	SCREEN (MD)	SIZE	D	EPTH SET ()	íD)	PACKER SET (MD)
		_						2 3/8	- -2	2173 RKB		None
31. PERFORATION RE	COBD (Interval	, size and	number)			32.	AC	ID, SHOT, F	FRACTU	JRE, CEMEN	T SQU	EEZE, ETC.
Perforat 2181 - 2	ed 2 sh <mark>ot</mark> 211	s/ft.				DEPTH I	ORC	(MD)	AMO	OUNT AND KIN	ID OF	MATERIAL USED
Total 60	holes											
0.48 hol	e sire					\- 						
38.*					PRGD	UCTION						
DATE FIRST PRODUCT	TION PI	RODUCTION	METHOD (F	lowing, g			e and t	ype of pump)	shu	it-in)	s (Producing or
DATE OF TEST	HOURS TEST	ED C	HOKE SIZE		N. FOR PERIOD	OIL—BBL.	:	GAS-MCF		WATER-BB)		GAS-OIL RATIO
LOW. TUBING PRESS.	CASING PRES		ALCULATED 4-HOUR RATE	OIL-	-BBL.	GAS-	MCF.	' 	VATER	BBL.	OIL G	RAVITY-API (CORR.)
34. DISPOSITION OF	GAS (Sold, used	for fuel, t	ented, etc.)				1 4			TEST WITNE	SSED B	T
35. LIST OF ATTACE	MENTS											
36. I hereby certify	that the fore	going and	attached in	formatio	n is compl	ete and cor	rect as	determined	from a	il available 1	records	
SIGNED K	gsha	nno	d			-eclo						7/31/75
SIGNED 7	G. Shar	See Instr	ructions an			<u>`</u>		on Revers	e Side		9	<i>1</i> /31/75

/.							
Promi 9-389 (Electropic)	•	UNITED ST	TATFS	MI TIMBUS	DUPLICATE*	Fer	Taling roved. Iges Bureau No. 42-11055.5.
		MENT OF			(See other i		i
		EOLOGICAL		. (101)	jevelsa side	o. Least best	MATION AND SELLE NO
						14-08-00	MILTIES OF THIS NAME
WELL CO	MPLETION C		LETION REP	ORT AN	D LOG*		
IS TYPE OF WEL	L: Oth WELL	WELL	pay Dothe	. Gas S	torage	7. UNIT AUREE	MENT NAME
b. TYPE OF COM	PLETION:	PLUG 4TT	DIFF. [TT]			Las Milp	as Gas Storage
NAW WELL XX	OVER L.J ES	PLEG DACK	nksym Cthe	·*		 -	
	rn Union Gas	Company				San Ysic	iro
3. ADDRESS OF UP		company				Giovanni	#14-14
1400 F	idelity Union	n Tower D	allas, Texa	.s		10. FIELD AND	FUOL, OR WILDCAT
	ill (Report location 654' FSL & 30			ise requiremen N R-1-E		Las Milp	Mas No BLOCK AND SURVEY
					:	OP AREA	MA ON BOOCK KIND SCHIET
At top prod. in	terval reported below	y same as	above				
At total depth	same as abo	· · · -	4. PERMIT NO.		ISSUED	Sec-19 T	1-15-N R-1-E NMPM
			4. PERMIT NO.	DATE	ISSUED	PARISH	
13. DATE SPUDGED	16. DATE T.D. REA	CHED 17. DATE CO.	MPL. (Ready to pro	(d.) 18. ELE	VATIONS (DF. RE	Sandoval	L New Mexico
6/9/75	6/18/75	6/22/	75	t t	17 RKB		5807
20. TOTAL DEPTH, MD	& TVD 21, PLUG.	BACK T.D., BID & TVD	22. IF MULTIPLE HOW MANY		23. INTERVALS DRILLED B		CABLE ICOLS
2602	RVAL(S), OF THIS CO	MPLETION-TOP, BOT	Single	ND TVD)*		0-2602	25. WAS DIRECTIONAL
							SURVET MADE
2403~2	433 Aqua Zar	ce	:				No
26. IYPN ELECTRIC	AND OTHER LOGS RU	N				2	7. WAS WELL CORED
Density 28.	y, Induction		GR-N. Cemen RECORD (Report of				Yes
CASING SIZE	WEIGHT, LB./FT				•	NG RECORD	AMOUNT PULLED
8 5/8	24.0	557	12 1/	4	350 sks c	lass B	None
5 1/2	15.5	2601	7 7/	~		cem w/300	sks Posmix
DV Tool	set at 1312	RKB Coment	circulated			cem w/312	sks Posmix
29.		NER RECORD	. circulated	on each	30.	TUBING RECOR	ID .
SIZE	TOP (MD)	OTTON (MD) SAC	KS CEMENT S.	SEEN (ND)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2 3/8 E	JE 2284'	None
31. PERFORATION RE	CORD (Interval, size	and number)	32	A	ID SHOT ERA	CTURE, CEMENT	SOUTEZE ETC
Perforat	ed 2 shots/fe	oot / 🐴	, <u> </u>	EPTH INTERVA		AMOUNT AND KIND	
2403 - 2	,		19/19		NONE		
	60 holes	1 7	10,4 . off			·	
0.48" Но	le size	\	11 7 ST. P	/ -	-,		·
33.*			PRODUCT	TIGN	·		
DATE FIRST PRODUCT	TION PRODUCT	rion authod (Flow	ing, g as tijt , pumpi	ng-size and t	type of pump)	well st	TATUS (Producing or
DATE OF TERM	HOURS TESTED	LONOVE STEE	PROP'N FOR	T. INT		Gas St	orage Well
DATE OF TEST	HOURS TESTED		PROD'N. FOR OI.	L-BBL.	GAS-MCF.	WATER—BBL.	GAS-OIL RATIO
None FLOW, TUBING PRESS.	CASING PRESSURE	CALCULATED	OIL-BBL.	GAS-MCF.	WATE	R—RBL. C	OIL GRAVITT-API (CORR.)
	<u> </u>	<u> </u>			<u> </u>		
34. DISPUSITION OF	cas (Sold, used for fi	iel, vented, etc.)				TEST WITNESS	ED BY

TITLE Geologist

DATE _

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

35. LIST OF ATTACHMENTS

UNITED STATES

SUBMIT IN DUPLICATE *

Form approved. Budget Bureau No. 42-R355.5.

5. LEASE DESIGNATION AND SERIAL NO.

DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

(See other instructions on reverse side)

14~UQ~U()	ロエーエスマン	5
 6. IF INDIAN.	ALLOTTEE (OR TRIBE NAME

WELL CO	MPLETION (OR RECON	APLETION I	REPORT A	AND LO	3* ""		ALLE ON EMILE NAME
1s. TYPE OF WEL	L: OII, WELL	GAS WELL	DRY	Other Gas	Storage	7. t	NIT ACREEMEN	T NAME
b. TYPE OF COM	PLETION:					Las	Milpas	Gas Storage
WELL	WORK DEEP-	DACK DACK	Diff. RESVR.	Other		S. F.	ARM OR LEASE	NAME
2. NAME OF OPERAT			ρ	•			Ysidro	
	nion Gas Co	Epany	<u> </u>	<u> </u>				
3. ADDRESS OF OPER	eator Lity Union To	ower Dell	se Tavas	75201	174		Iff #1-15	L, OR WILDCAT
4 LOCATION OF WE	t Report location	clearly and in a		* * * * * * * * * * * * * * * * * * *	ements A			
At surface 19	108' FNL & 6	18' FEL			~	M. 11.	Milpas SEC., T., R., M.,	OR BLOCK AND SURVEY
	c 19, T15h, erval reported below		•	١,	So CON CO		OR AREA	
				1 0	30 COL.	3/		
At total depth			14, PERMIT NO		CO CO		19, T15	N, RIE, NMPM
			14. PERSILI NO.		185620	1 - 1	doval	
15. DATE SPUDDED	16. DATE T.D. REA	CHED 17. DATE	COMPL. (Ready t	to prod.) 18	ELEVATIONS (D			New Mexico
7/2/75	7/9/75		2/75	1 20.	30' GL	5941' R		5930
20. TOTAL DEPTH, MD	& TVD 21. PLUG.	BACK T.D., MD &		LTIPLE COMPL.,			ARY TOOLS	CABLE TOOLS
2730 RKB	26	69 3 RKB	Sing	le Te	- DRIL	LED BY 27	30	
24. PRODUCING INTER	IVAL(S), OF THIS CO	OMPLETION-TOP,	BOTTOM, NAME (MD AND TVD)*			2	5. WAS DIRECTIONAL SURVEY MADE
2550-2570	RKB. Aqua	7.700						
28. TYPE ELECTRIC	•						1 27 7	NO VAS WELL CORED
	Compensate		Formation	Density	Camant Re	and CP_X		
28.			NG RECORD (Rej			ond, on-n		No
CASING SIZE	WEIGHT, LB./FT			LE SIZE		ENTING RECOR	D	AMOUNT PULLED
8 5/8	24# K-55	677 R	KB 12	1/4	375 sks d	class E.	Cement	Circulated
5 1/2	15.5# K-55	2739	KKB 7	7/8	1st stage			
		2729			2nd stage			11
	t at 1315 kl		t Circulate	ed to sur	face.			
29.		INER RECORD			30.		G RECORD	
None	TOP (MD)	BOTTOM (MD)	SACKS CEMENT.	SCREEN (MI			SET (MD)	PACKER SET (MD)
NOILO					2_3/8	4545	RKB	None
31. PERFORATION REC	CORD (Interval, size	and number)		82.	ACID, SHOT	FRACTURE.	CEMENT SQU	JEEZE, ETC.
Perforated	2 shots/ft.	•		DEPTH INT	ERVAL (MD)			MATERIAL USED
2550-2570				Non	ie		·	
Total 40 h								
0.42 hole	size					<u> </u>	···	
33.*			PRC	DUCTON		<u> </u>		
DATE FIRST PRODUCT	ION PRODUC	TION METHOD (F	lowing, gas lift, p	DUCTION sumping—size	and type of pun	np)	WELL STATE	s (Producing or
						•	shut-in)	
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR	OIL-BBL.	GAS-M	CF. WAT	Shutin	- Gas Storage
							ĺ	
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATI	OIL-BBL.	GAS-	MCF.	WATER-BBL.	OIL	GRAVITY-API (CORR.)
24 - 0.0000000000000000000000000000000000	1	<u> </u>			·		<u> </u>	
34. DISPOSITION OF G	As (Soia, usea for fi	ues, vented, etc.)				TEST	WITHESSED !	3 T
35. LIST OF ATTACH	MENTS							
·	•			, •				
36. I hereby certify	that the foregoing	and attached in	formation is com	plete and corre	ect as determin	ed from all av	allable records	1
F.	ashans	uk						
SIGNED R. G	Sharrock	100	_ TITLE Ge	ologist_			DATE 7/	31/75

SIGNED

SUBMIT IN DUPLICATE. UNITED STATES SUBMIT

(See other in-

Form approved. Budget Bureau No. 42-2355.5.

DATE 13/8/75

		IMENIO			ERIOF	`	reverse si	de) 5. LEASE DE	SIGNAT	ION AND SERIAL NO.
		GEOLOGIC	AL SUF	(VEY				14-08-0		
		OR RECO	MPLETIC	ON R	EPORT	AN	D LOG*	6, IF INDIAN	, ALLO	TTEE OR TRIBE NAME
1a. TYPE OF WELL	L: OII		DR	v 🗌 (ther _Gas	_St	orage	7. UNIT AGE	EEMRNT	NAME
L TYPE OF COMP							G.	Las Mi	lpas	Gas Storage
NEW	OVER DE	EP- PLUG BACK	Dirr. RESV	e. 🗌 🂢	ther			S. FARM OR	LEASE	NAME
2. NAME OF OPERAT	on							San Ys:	idro	
Southe	m Union	Gas Company	•					9. WELL NO.		
3. ADDRESS OF OPER								San Ys	idro	#1-17
1402 F	idelity H	nion Tower.	Dallas	. Tex	as 75	201		10. FIELD AT	D POOT	L, OR WILDCAT
1402 F	L (Report locat	ion clearly and in	accordance	with any	State requi	emen	ta)*	Las Mi	lpas	
		North Line	§ § 300	ft. i	ron Eas	t L	ine		R., M.,	OH BLOCK AND SURVEY
At top prod. into			MADN							
At total depth	. 18, 1-1	5-N, R-1-E,	MATE					THEM	מ	1 E Can 19 MM
		_	14. PER	MIT NO.		DATE	ISSUED	12. COUNTY	OR	1-E Sec-18 NMPN
San	me as abov	Е			}			PARISH	. 1	Mary Marrian
15. DATE SPUDDED	16. DATE T.D.	REACHED 17. DAT	E COMPL. (Ready to	prod.) 18	ELE	VATIONS (DF. R	Sandov		New Mexico
7/12/75	7/20/75	ļ	7/23/7	7 5	l l	91		2 RKB	1	5691
7/12/75 20. TOTAL DEPTH, MD	7/20/75	UG, BACK T.D., MD &		IF MULT	IPLE COMPL.		23. INTERVA	LS ROTARY TOO		CABLE TOOLS
				HOW MA	_		DRILLED	2328		
2328 RKB 24. PRODUCING INTER	VAL(S), OF THIS	COMPLETION-TO	P, BOTTOM,	Sing		· · · · · ·	·	1 2328	2:	S. WAS DIRECTIONAL SURVEY MADE
									}	304.51 2425
1985 - 20	005 RKB Aq	ua Zarca						2 2 1975		No
26. TYPE ELECTRIC A	NO OTHER LOGS	RUN Cement	Bond Lo	og, G	uma Ray	Ne	utron. D	ual Induct	27. W	AS WELL CORED
Laterolog.	Comp. Neut									No
28.					rt all string					
CASING SIZE	WEIGHT, LB	/FT. DEPTH SI	ET (MD)	HOL	B SIZE		CEMENT	ING RECORD		AMOUNT PULLED
8 5/8"	24.0 K-	55 516' F	RKB	12	1/4"	280	sks Cla	ss B Cement		Circulated
5 1/2"	15.5 K-				7/8"			00 sks Clas		11
		<u> </u>		<u>-</u>				75 sks Clas		11
D.V. Tool s	set at 117	Z: DKR		Ceme	ented to					
29.	SEL AL III	LINER RECORD			on cod o		30.	TUBING REC	ORD	
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CE	MENT*	SCREEN (M	D)	SIZE	DEPTH SET (M	(D)	PACKER SET (MD)
None			-	-	, i	·	2 3/8"	1886' RKE		None
							2 3/0	1000 KRI		11020
31. PERFORATION REC	CORD (Interval,	ize and number)	'	'	82.	AC	ID, SHOT. FF	ACTURE. CEMEN	T SOU	EEZE, ETC.
Perforated	1 2 chate	'F+			DEPTH IN			AMOUNT AND RIN		
1985' - 20	•				No					
Total 40					110					
0.42 hole										
0.42 11016	5146									
33.*				PROD	UCTION		····	······································		
DATE FIRST PRODUCT	ION PRO	OUCTION METHOD (Flowing, ga	a lift, pu	mping—size	and t	type of pump)	WELL	STATU	8 (Producing or
									ut-(n)	. Can Stamona
DATE OF TEST	HOURS TESTER	CHOKE SIZE	PROD'N		OIL-BBL.		GAS-MCF.	WATER-BB		GAS-OIL BATIO
			TEST F	ERIOD]	
FLOW. TUBING PRESS.	CASING PRESS			BL.	GA8-	MCF.	WA WA	TER-BBL.	OILG	BAVITY-API (CORR.)
	}	24-HOUR RAT	TE	10	(*		1	-		
34. DISPOSITION OF G	LE (Sold, used fo	or fuel, vented, etc.)	-/\$	4		$-$ \	TEST WITNE	38#D P	· · · · · · · · · · · · · · · · · · ·
				18		100	5		B	· -
35. LIST OF ATTACH	MINTS			+	- 11	19,		1		
				1 .	nk .()	_	UM.			

TITLE

ATTACHMENT VI. SCHEMATIC OF ANY PLUGGED WELL ILLUSTRATING PLUGGING DETAIL

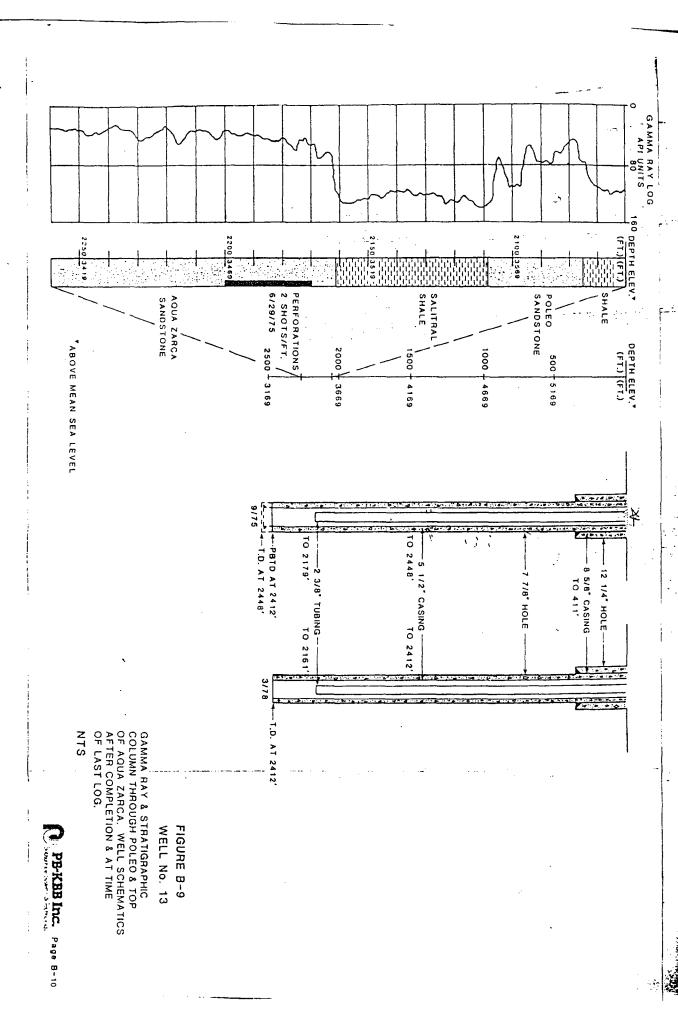
Form 3160-5, (June 1990)

UNITED STATES DEPARTMENT OF THE INTERIOR

	/ FORM APPROVED
	Budget Bureau No. 1004-013
	Expires: March 31, 1993
J _ 1 ()	

35

DUDEAU OF	I AND MANACEMENT	KEUULIVI	Expires: March 31, 1993
BUKEAU OF	LAND MANAGEMENT		5. Lease Designation and Serial No.
SUNDRY NOTICES	AND REPORTS ON WE	15	NM 14 23 /
Do not use this form for proposale to a	rill or to deepen or reentry	28 Hittoria Espandid	6. If Indian, Allottee or Tribe Name
Use "APPI ICATION FO	OR PERMIT—" for such prop	nosals	
The state of the s	Sitt Entern Tor Substitution	A BUDUEROUE H M	· · · · · · · · · · · · · · · · · · ·
SURMI	T IN TRIPLICATE		7. If Unit or CA, Agreement Designation
			1:00 T0 = :0\
1. Type of Well	,		NM 78348X
Well Well Other GAS	Storage Observa	HON Well	3. Well Name and No. KING 1-13-
2. Name of Operator	, ~		SAN YSINAU 13
PNM	Gas Services	[9	P. API Well No.
3. Address and Telephone No.	· •		30- 04 3-20160
4. Location of Well (Footage, Sec., T., R., M., or Survey	TIVER AVE SW	Albuguerque MM	10. Field and Pool, or Exploratory Area
4. Location of Well (Footage, Sec., T., R., M., or Survey	Description)	7/56 /50/1241-45	27
/ -	I	(30),	11. County or Parish, State
1300°F S	L & 550 FWL		
M - SECTIONI 17	TOWNSHIP ISN P	ANAF IE	SANDOVAL, N.M.
M - SECTION 17. 12. CHECK APPROPRIATE BOX	(c) TO INDICATE NATUR	E OF NOTICE PEROPI	OP OTHER DATA
12. OHEON APPROPRIATE BOX	(S) TO INDICATE NATION	E OF NOTICE, REPORT	, OR OTHER DATA
TYPE OF SUBMISSION		同四個時間	
	Abandonment		
☐ Notice of Intent	AFMSS —	1311	Change of Plans
Subsequent Report Adl	Recompletion	JUL 2 3 1998 !	New Construction
		•	Non-Routine Fracturing
Eng			Water Shut-Off
Final Abandonment Notice Geo		Sand Com Dill	
Sur	Other	<u>।हामीर्याः स्त्र</u>	Dispose Water Note: Report results of multiple completion on Well
Ann	W BYPE		Completion or Recompletion Report and Log form.)
 Describe Proposed or Completed Operations (Clearly states give subsurface locations and measured and true ver 	differtinent details, and give pertinent date	s, including estimated date of starting ar	y proposed work. If well is directionally drilled,
	ocardopus for all markets and zonce per	ment to this work.	
PAA ON JUNE 26,1998			
I SET BRIDGE PLANT AND BEA			•
1 SET BRIDGE Plug AT 2120	D FEET. " CEMENTOL) WITH GO SACKS	140 SACKS OF CEMENT
BLLUW RETAINER	- Plug of 20 sacks A	ROW RETAINED	• • • • • • • • • • • • • • • • • • • •
•	, , , , , , , , , , , , , , , , , , , ,	deve izerninek)	
2. S'ET SURFACE PLUG IAF	210 m (1541)	TAGEN WITTH 35 S	THE DE ACHEOT
in the head in	SIBICET. A CENT	COLLY CALL 33 3	FULL DI ELILLI
3. CLEAN - 4P AS PER BLA	1 INSTRUCTIONS		
4 PLACE ABANDUMENT	MARKER		
		LASTNE WT	15 600 00/
		CP 37100 451 2	15.5 parties
A los a Calabata			,
NOTE: THIS WORK HAS	RECEIVED A PRI	OR VERBAL APA	PRIVAL TO PERFORM
THE ABOVE.			10/10/0/0/
- AL YEPPA WIT	NESSED THE PHA		
14. I hereby certify that the forgoing is true and correct			
simul Soul Klivin	e Title Senior	Engineer	Date 6/36/98
318160	1100		Date N (XX / S)
(This space for Federal or State office use)	1 Lan	ds and Mineral Resources	7/2000
Approved by Atherina of month is the	th Title		Date
Conditions of approval, if any:			
<u></u>	mismest from	ocation.	÷





FARMINGTON, NEW MEXICO 87499

Angil & Medix-Tus CEMENT JOB DETAIL SHEET

CUSTOMER	2110	7 (3.2. DSG	< < 4	3///	·	DATE	- 7	/	9¢ F.R.	*			SER. SU	P. OVC		TYPE JO	رسر OB محمع مرز	4_
LEASE & WELL	NAME - OC	CSG	3 5 6	<i>p</i> / -	Loc	CATION			<i>Z 2</i>			CC	YTNUC	•			7-7-	-7
DRILLING CON	1 /	<u> </u>	20											767	0/2			
DRILLING CONT	TRACTOR	mu	لإحطر رنسا)		4			OPERATO)Ř								
MATERIAL		TYPE C	F PLUGS			LIST	CSG HA	HOWAR	ię.		so	TOP		PHYSIC	CAL SLURE	RY PROP	ERTIES	
FURNISHE	D T	TOP BTM									MANI FOLD Y N	OF EACH FLUID	SLURRY WEIGHT PPG	SLUARY YIELD FT ³	WATER GPS	PUMP TIME HR: MIN:	Bbi SLUAF	Bbi MIX WATER
7. 0	SK	<u> </u>	<7	C 5		100	1 :	; - ?	جے -	<u></u>	50							
65	7	· /\\	<i>T</i>			····												-
			,			.77			11 2	- 7			 				├	
	<u></u>		~7	0. /	_ع_	FIL	_/_	مكت	<u> </u>									-
																		
Available Mix V		Ebi.				ble Displ. f	luid		Bbt.	TDC C			L	<u> </u>	L	TAL		
	HOLE EXCESS!	DEPTH I	SIZE 1	TBG WGT.	-CSG-0		DEPTH			TBG-C	SG-D.P.		DEPTH	SHOE	OLLAR DE		TAGE	
3,20 0	ZACCSO	j	- 5"-2"		1-	-	527 111		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	101.	 		JE1 771	37102	1	- -3	AGE	
	LAST C	ASING		1		PKR-CMT F	ET-BA	PL-LINE		T	PERF	DEPTH		TOP C	ONN.		WELL F	LUID
SIZE	WGT.	TYPE	DEPTH	\pm		BRAND &			DEPTH	\bot	TOP	ВТА	4	SIZE	THREAD	n	PE	WGT
			<u> </u>			· · · · · · · · · · · · · · · · · · ·										\perp		
TBG.	CAL. DISPL CSG.	L, VOL. Bbl. CSG	TOTAL		PSI PLUG	TO REV		P. MAX	RATEO	TBG	OP.	N TAR	ED ED	OP OP	OISP TYPE	L. FLUIO	GT	WATER SOURCE
							i,						Ì	1			1	
EXPLANATION	: TROUBL			·		TC., PRIOF	TO CE	MENT	ING:									
	806	PRES ESSURE - PS	SURE RATE				1		100000					ANATION	<u> </u>			
TIME HR: MIN:	PIPE		ULUS	RATE BPM	F	UMPED		UID YPE	SAFETY N		NG: CH	EW U	CO. RE	PSI				
3 20	4/3	1				7,5~		<u> </u>					WPS 🖸					
⇒ <u>, , </u>	• •			2	44	<u> </u>	1-	201	1 - 1	2)		12/	11/2	ر رو				
اـــــــــــــــــــــــــــــــــــــ							<u> </u>		1	1:1	زمتن		11/9	1 >				
· /-						7	 		10	1-	7.4	15			112			
2010	<i>\$</i> .					<u> </u>			7-1	<u> </u>	5 6	<u> </u>	<u>سر ک</u>	1=40	- cil	2		
	<u>ر</u>			:	-	,	-	- 17.) 	V/1	7		3: 4	مبر سر <u>د</u>	F 1	6		7.7.9
													-/ ,					·
					+-		-											
							<u> </u>											
			 -				+		1									
					\blacksquare													
					-		-		+									
					-				-									
BUMPEO PLUG	PSI TO BUMP	? FL0	TAC	TOTAL Bbl.	ļЯ	Bbi. CMT IETURNS/	LEF	PSI -T ON	SPOT		SER. SUI	P. (ے ہے'	Levi			
	PLUG		UIP F	PUMPED	P	EVERSED	1	SG	CEMEN	17	CUSTOM	ER REP.	7	=	to			
YN			17				1						100	/	ا الما تعمل	~~		

Form 3160-5 (June 1990)

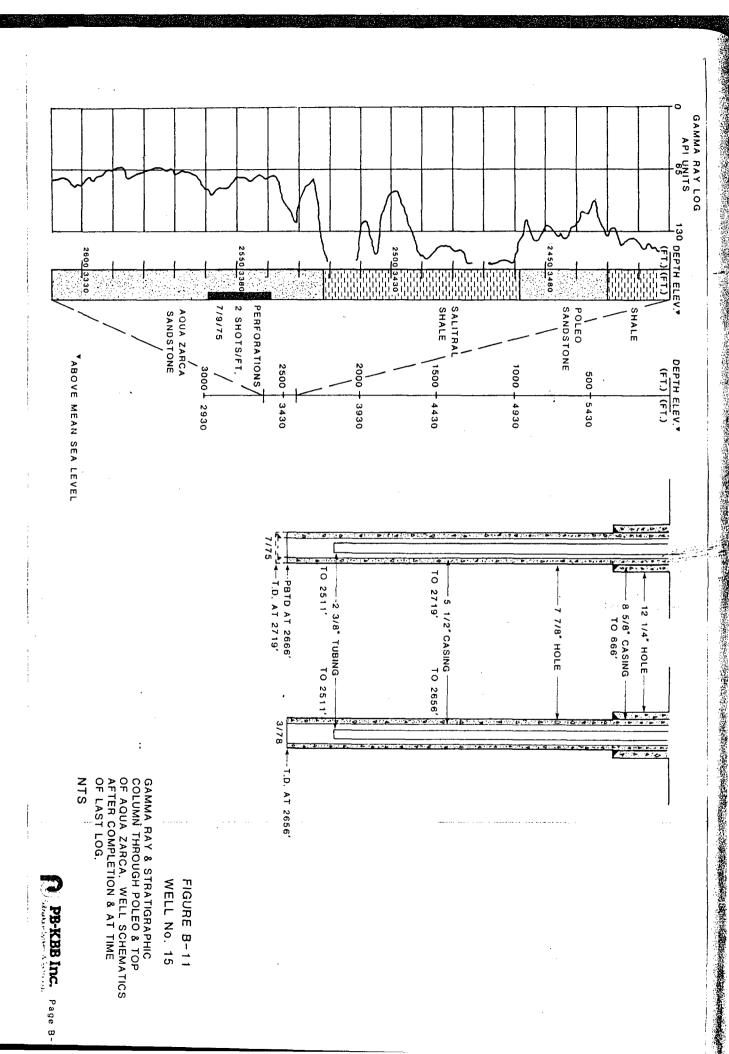
UNITED STATES DEPARTMENT OF THE INTERIOR

FORM APPRO	OVED
Budget Bureau No.	1004-0135
Expires: March	31 1993

BUREAU OF LAND MANAGEMENT 5. Lease Designation and Serial No. 6. If Indian, Allottee or Tribe Name 98 JUL -2 SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill or to deepen or reentry to a different reservoir. ALBUQUERQUE, N.M. Use "APPLICATION FOR PERMIT—" for such proposals 7. If Unit or CA, Agreement Designation SUBMIT IN TRIPLICATE MM078398X I. Type of Well GAS STURAGE OBSCRUZTION WILL Oil Gas Well Well SAN YSI OFO (CLUITE)
9. API Well No. 2. Name of Operator PNM Gas Sepuices 30-043-20161 3. Address and Telephone No. 414 Silver Ave SW Albuquer que NM 87158

Georgian (Fus.) 241-45-37 10. Field and Pool, or Exploratory Area 4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 11. County or Parish, State 1908 Fect FNL & 618 Fect FEL CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA 12 TYPE OF ACTION TYPE OF SUBMISSION Natice of Intent Change of Plans AFMSS Recompletion Adjud Am Subsequent Report Plugging Back 1 Non-Routine Fracturing JUL 2 3 1998 Casing Repair Water Shut-Off Final Abandonment Notice Conversion to Injection Geo Dispose Water (Note: Report results of multiple completion on Well DIT. 3 and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, 13. Describe Proposed or Completed Operations (Clearly give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)* PHA on June 27, 1998 I SET BRING PLUG AT 2018 FEET. * CEMENTED WITH 110 SACKS (90 SACKS BELOW RETAINER PLUG + 20 SACKS ABOVE RETAINED. SET SURFACE PLUG AT 310 FEET. * CEMENTED WITH 35 SACKS OF CEMENT. CLEANUP AS PER BLM FNSTRUCTIONS PLACE ABANDONMENT MARKER CASING WT. = 15.5pounds A PRIOR VERBAL APPROVAL TO PERFORM THE NOTE! THIS WORK HAYS RECEIVED ABUVE. -AL YEPPA WITNESSED THE PYA 14. I hereby certify that the foregoing is true and correct Deniur Engineer equipment tron

or representations as to any matter within its jurisdiction





CEMENT JOB DETAIL SHEET

CUSTOMER:	1/M 0	~	~	.1	DATE	1 00	a	F.R. #			SER. SU	Po Tall	.	TYPE JO	DB) =	43
15155 2 WELL	NAME 0000	15	0-20	112-5	OCATION	//	<u> </u>			10	OUNTY	JOYC	<u> </u>		j- 5	77
CEASE & WELL	NAME - OCSG			,	LOCATION						7,	110	do u	61		
DRILLING CON	TRACTOR RIG	#	- 22/		7			OPERATOR						····		
		12.	PLUGS	<u> </u>												
MATERIA		TYPE OF	PLUGS'	-	LIST	CSG HAR	OWAR	<u> </u>	sq			1	CAL SLUR		ERTIES	
FURNISHE	ED TOP								MAN FOL		SLURRY	SLURRY	WATER	PUMP TIME	Вы	Bbi MIX
									Y			FT ³	GPS	HR; MIN:	SLURA	WATER
120	. مرد سنب	مسي	الر بستا		/a-				سيد مدا							
7	520			<u> </u>				<u> </u>							-	
2 1 2 m	2000	- 1º4 c	7												-	
										-						
	<u></u>	<u> </u>				.1.	2/	110								
		<u>``</u>	<u> </u>		7			<u> </u>				 	 -		+	
27/										<u> </u>		ļ			ļ	
								······································				T		-		
										+		 	-		-	-
Available Mix		Bbl.			ailable Displ.	Fluid		Bbl.				L	<u> </u>	OTAL	<u>l</u> ,	
	HOLE			TBG-CS					3G-CSG-				COLLAR D			
SIZE %	EXCESS DE	PTH	SIZE	WGT.	TYPE	DEPTH	SI	ZE WO	ST.	TYPE	DEPTH	SHOE	FLO	AT S	TAGE	
	LAST CASI					RET-BR PL	-LINEF			ERF DEPTH		TOP C			WELL F	
SIZE	WGT.	TYPE	DEPTH	 -	BRAND 8	TYPE		DEPTH	TOF) B	TM .	SIZE	THREAC	T	YPE	WGT
<u> </u>									<u> </u>							
TDC	CAL. DISPL. VO	OL. Bbl. CSG	TOTAL	CAL. PS				MAX 1 RATED	BG PSI		MAX CSG I	PSI OP		PL. FLUIC		WATER SOURCE
TBG.	CSG.	CSG	TOTAL	BUMP PLI	UG TO RE	V SQ	P51	HATED	UP	H/	(IED	OP	TYPE		'GT	
			····													
EXPLANATION	N: TROUBLE S	ETTING T	OOL, RUNN	IING CSG.	., ETC., PRIC	OR TO CEM	IENTIN	NG:						·		_
													 			
TIME	PRESS	URE - PSI	URE RATE	RATE	BLI SLUID			SAFETY ME	ETING	CDEW [LANATION	ч			
HR: MIN:	PIPE	ANNU		BPM	Bbi FLUID PUMPED	FLUI TYP		TEST LINES		CHEW C	CO. H	PSI	·		· · · · ·	
								CIRCULATI	NG WEL	RIG 🗆	WPS □) .				
2/30	1.00		•	ا با	20	100	مذير	11)	3/-	ν z)	hea	نيسر				
122	100			2				r 5/3			Mex			·	,	
11/15	. 0				24			رسر	N,		1000		7			
3:44	0					1007	- 7	57	2 11		FPI,					
3: 470	1000				4	11	,	7	U,	54	0,-	17/1	100	11:5	7	
, , , , , , , , , , , , , , , , , , , ,														,,,,,		
																_
																
		<u> </u>														
	-															
								ļ <u>.</u>								
	-						,-	-			· · · · · · · · · · · · · · · · · · ·					
	-															
		+			·			 								
	 	+														
ļ	 	+						 								
	-	 						-								
1	I							ļ								
	 	1	1	- 1		1										
RUMPED	PSLTO	TE	ST T	TOTAL	Rhi CNAT	PC	:1	COOT	CER	CUD T						
BUMPED PLUG	PSI TO BUMP PLUG	TES FLO EQU	AT	TOTAL Bbl. JMPED	Bbl. CMT RETURNS REVERSEI	/ LEFT	ON	SPOT TOP CEMENT		SUP.	20 <u>/</u>	ہے ہے۔				

ATTACHMENT VII. OPERATIONS PLAN

- 1. AVERAGE INJECTION RATE:
 36,000 GALLONS OF WATER PER DAY (857 BWPD) WITH
 MAXIMUM OF 46,000 GALLONS OF WATER PER DAY (1,095 BWPD)
- 2. THE SYSTEM WILL BE OPEN
- 3. AVERAGE INJECTION PRESSURE:
 500 PSI AND THE MAXIMUM WILL BE 700 PSI
- 4. THE SOURCE OF THE INJECTION WATER WILL BE PRODUCED WATERS FROM THE SAN YSIDRO GAS STORAGE UNIT WELLS WITHIN THE IMMEDIATE AREA (T-15-N, R-1-E) IN SANDOVAL COUNTY, NEW MEXICO. THE SOURCE OF INJECTION WATER IS FROM THE AQUA ZARCA SANDSTONE FORMATION OF THE SAN YSIDRO GAS STORAGE UNIT WELLS. THE WATER TO BE INJECTED IS INTO THE EXACT AQUA ZARCA FORMATION THAT THE WATER WAS INITIALLY PRODUCED FROM. THEREFORE, SINCE THE PRODUCING WATERS AND INJECTIONS WATERS FORMATION ARE THE SAME AQUA ZARCA PRODUCING FORMATION THE COMPATIBILITY SHOULD BE THE SAME.
- 5. THE INJECTION IS FOR DISPOSAL PURPOSE INTO A ZONE (AQUA ZARCA SANDSTONE) THAT IS NOT PRODUCTING OIL OR GAS WITHIN ONE (1) MILE OF THE PROPOSED INJECTION WELL. A WATER ANALYSIS OF THE DISPOSAL WATER ZONE IS IN ATTACHMENT XI. AND ATTACHMENT VII-5.

ATTACHMENT VII-5. WATER ANALYSIS OF WATER INJECTION ZONE

PRODUCTION PROFITS

DIVISION OF SONICS INTERNATIONAL, INC. Petroleum Service Laboratory

DALLAS, TEXAS

Field	7		n Ysidro No. 4	C. Well No.	
Formation Aqua 2	Zarca Zone	Depth 2	260-2280	ft. Perl.	· CC/I,
Source of Sample			····		
Date Collected Rec: 3-	6-72	by			
	REPO	ORT OF W	ATER ANALYS	<u>IS</u>	
7. A. M				ac :	
		ific Gravity	_1.01		ARCENT
Total Dissolved Solids	_13227_ Resis	stivity (Ohmmeti	ers at 68° F.) 6	19 Hydrogen Sulfide_	HOSEWI
,	DISS	OLVED MINERA	L ANALYSIS PATTERN	!	
20 14				10 11	20
20 15	10		0 5	- 10 15 գուլավագարարարար	
100	1				100
	•				
Ca pulminimimimim	վումիովումիովուվու միո	կախոխախանակա յիու	andanlanlanlanlanlanlanlanlan	վու ավավակականովու	ню.
10					10
1			1		. }
Mg III III III III III III III	 	junjunjunjunjunj		 malanlanlanlanlanlanlanlanlanl	III IIII SO₄
10					10
Fe Instructional and	յունումումանունունում	հումահահահահան	latin dan dan dan dan dan dan dan dan	մուռ համասիավումում համասիա <u>վ</u>	unium CO:
10	(Number)	Below Ion Symb	ool Indicates mea/Scal	e Unit)	10
1	(Number)	Below Ion Symb	ool Indicates meq/Scal	e Unit)	10
10		Below Ion Symb	ool Indicates meq/Scal	e Unit)	10
1		Below Ion Symb		e Unit) SUSPENDED SOLIDS A	
10		Below Ion Symb meq/I			MALYSIS
10	SIS	·		SUSPENDED SOLIDS A	MALYSIS
DISSOLVED SOLIDS ANALY	<u>SIS</u> mg/I	·	PRECIPITATED AND	SUSPENDED SOLIDS A	MALYSIS
DISSOLVED SOLIDS ANALY: Total Solids (Calc.)	SIS mg/I 13227	meq/I	PRECIPITATED AND	SUSPENDED SOLIDS A	MALYSIS
DISSOLVED SOLIDS ANALY: Total Solids (Calc.) Sodium (Calc.)	SIS mg/I 13227 3830	meq/I	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles	SUSPENDED SOLIDS A	MALYSIS
DISSOLVED SOLIDS ANALY: Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved)	SIS mg/I 13227 3830	meq/I	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble	SUSPENDED SOLIDS A	MALYSIS
DISSOLVED SOLIDS ANALY: Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barium Calcium	SIS mg/I	meq/1 166.4 -7 -21.2	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium	olids as	MALYSIS
DISSOLVED SOLIDS ANALY: Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barium	sis mg/I 	meq/1 166.4 -7 -1 21.2 5.2	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium	SUSPENDED SOLIDS A	MALYSIS
DISSOLVED SOLIDS ANALY: Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barium Calcium Magnesium Chloride	sis mg/i 13227 3830 19 	meq/I 166.4 .7 - 21.2 5.2 76.1	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium	olids as	MALYSIS
DISSOLVED SOLIDS ANALY: Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barium Calcium Magnesium Chloride Bicarbonate	mg/I 13227 3830 19 425 63 2700 2590	meq/I 166.4 .7 - 21.2 5.2 76.1 42.5	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate	olids) as	MALYSIS
Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barlum Calcium Magnesium Chloride Bicarbonate Carbonate	sis mg/l 13227 3830 19 425 63 2700 2590	meq/1 166.4 .7 -1 21.2 5.2 76.1 42.5 0.	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo	olids) as	MALYSIS
DISSOLVED SOLIDS ANALY: Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barium Calcium Magnesium Chloride Bicarbonate	mg/I 13227 3830 19 425 63 2700 2590	meq/I 166.4 .7 - 21.2 5.2 76.1 42.5	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo Acid Insolubles	olids) as	MALYSIS
Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barlum Calcium Magnesium Chloride Bicarbonate Carbonate	sis mg/l 13227 3830 19 425 63 2700 2590	meq/1 166.4 .7 -1 21.2 5.2 76.1 42.5 0.	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo Acid Insolubles Sand & Clay	olids assassass	ANALYSIS mg
Total Solids (Calc.) Sodium (Calc.) iron (Dissolved) Barium Calcium Magnesium Chloride Blcarbonate Carbonate Sulfate	sis mg/l 13227 3830 19 425 63 2700 2590	meq/1 166.4 .7 -1 21.2 5.2 76.1 42.5 0.	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo Acid Insolubles	olids) as as as as as (Quan.)	ANALYSIS
DISSOLVED SOLIDS ANALY: Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barium Calcium Magnesium Chloride Bicarbonate Carbonate Sulfate TOTAL IRON	sis mg/l 13227 3830 19 425 63 2700 2590	meq/1 166.4 .7 -1 21.2 5.2 76.1 42.5 0.	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo Acid Insolubles Sand & Clay	olids assassass	ANALYSIS
Total Solids (Calc.) Sodium (Calc.) iron (Dissolved) Barium Calcium Magnesium Chloride Blcarbonate Carbonate Sulfate	sis mg/l 13227 3830 19 425 63 2700 2590	meq/1 166.4 .7 -1 21.2 5.2 76.1 42.5 0.	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo Acid Insolubles Sand & Clay	olids) as as as as as (Quan.)	ANALYSIS
DISSOLVED SOLIDS ANALYS Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barium Calcium Magnesium Chloride Bicarbonate Carbonate Sulfate TOTAL IRON SOLUBILITY CALCULATIONS	mg/I 13227 3830 19	meq/1 166.4 .7 -1 21.2 5.2 76.1 42.5 0.	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo Acid Insolubles Sand & Clay Barlum Sulfate	olids) asasasss) (Quan.)(Qual.)	ANALYSIS
DISSOLVED SOLIDS ANALY: Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barium Calcium Magnesium Chloride Bicarbonate Carbonate Sulfate TOTAL IRON SOLUBILITY CALCULATIONS Calcium Carbonate Stability	mg/I 13227 3830 19 425 63 2700 2590 0 3600	meq/1 166.4 .7 -1 21.2 5.2 76.1 42.5 0.	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo Acid Insolubles Sand & Clay	olids) as as as as as (Quan.)	ANALYSIS
DISSOLVED SOLIDS ANALY: Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barium Calcium Magnesium Chloride Bicarbonate Carbonate Sulfate TOTAL IRON SOLUBILITY CALCULATIONS Calcium Carbonate Stability Calcium Sulfate Stability at	mg/I 13227 3830 19 425 63 2700 2590 0 3600	meq/1 166.4 -7 -1.2 5.2 76.1 42.5 0. 74.9	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo Acid Insolubles Sand & Clay Barlum Sulfate	olids) asasasss) (Quan.) (Qual.) Scaling Tendency	PØS
DISSOLVED SOLIDS ANALY: Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barium Calcium Magnesium Chloride Bicarbonate Carbonate Carbonate Sulfate TOTAL IRON SOLUBILITY CALCULATIONS Calcium Carbonate Stability Calcium Sulfate Stability at Concentration 2	mg/I 13227 3830 19	meq/1 166.4 -7 -1.2 5.2 76.1 42.5 0. 74.9	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo Acid Insolubles Sand & Clay Barlum Sulfate	olids) asasasss) (Quan.)(Qual.)	ANALYSIS
DISSOLVED SOLIDS ANALY: Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barium Calcium Magnesium Chloride Bicarbonate Carbonate Sulfate TOTAL IRON SOLUBILITY CALCULATIONS Calcium Carbonate Stability Calcium Sulfate Stability at	mg/I 13227 3830 19 425 63 2700 2590 0 3600	meq/1 166.4 .7 21.2 5.2 76.1 42.5 0. 74.9	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo Acid Insolubles Sand & Clay Barlum Sulfate	olids) asasasss) (Quan.) (Qual.) Scaling Tendency	PØS

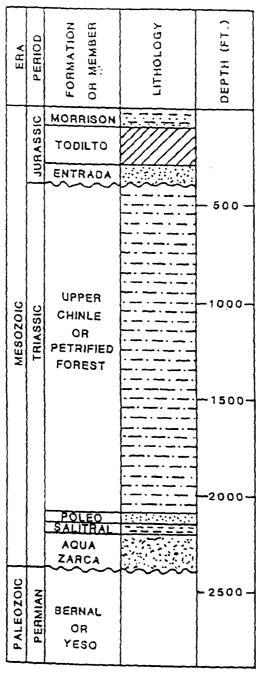
ATTACHMENT VIII. GEOLOGIC DATA – SAN YSIDRO STRATIGRAPHY AND LITHOLOGY

THE PROPOSED INJECTION INTERVAL IS THE AQUA ZARCA SANDSTONE FORMATION FROM APPROXIMATELY 2180' TO 2310'. THERE IS NO KNOWN DRINKING WATER SOURCES BELOW THE ENTRADA FORMATION.

THE EXPECTED FORMATION DEPTHS IN THE INJECTION WELL (SAN YSIDRO #6) ARE AS FOLLOWS:

FORMATION	DEPTH, FT.
MORRISON	0 - 84
TOLDILTO	85 –294
ENTRADA	295 – 400
UPPER CHINLE OR PETRIFIED FOREST	401 – 2123
POLEO	2124 – 2166
SALITRAL	2167 – 2179
AQUA ZARCA	2179 - 2397
BERNAL OR YESO	2398 - 2902

SAN YSIDRO STORAGE PROJECT STRATIGRAPHY













SANDSTONE-SHALE

GYPSUM

SANDSTONE SHALE-SILSTONE SHALE

APPLICATION FOR AUTHORIZATION TO INJECT PNM GAS RESOURCES SAN YSIDRO #6

ATTACHMENT IX. PROPOSED STIMULATION

THERE WILL BE NO PROPOSED STIMULATION IN THE SAN YSIDRO #6 INJECTION WELL. THIS WELL IS ALREADY AN EXISTING COMPLETED WELL.

APPLICATION FOR AUTHORIZATION TO INJECT PNM GAS RESOURCES SAN YSIDRO #6

ATTACHMENT X. WELL LOGGING AND TEST DATA OF THIS WELL

WELL LOGS FOR THE SAN YSIDRO #6 WELL HAVE ALREADY BEEN SUBMITTED TO THE NMOCD ~ 1-22-1974.

ATTACHED IS LOGGING DATA PERTAINING TO SAN YSIDRO #6 WELL. INCLUDED IN THE ATTACHMENT ARE THE :

- GAMMA RAY LOG
- GAMMA RAY NEUTRON LOG

ATTACHMENT XI. CHEMICAL ANALYSIS OF FRESH WATER FROM WELLS WITHIN ONE MILE OF INJECTION WELL

Well file

PRODUCTION PROFITS

Petroleum Service Laboratory
DALLAS, TEXAS

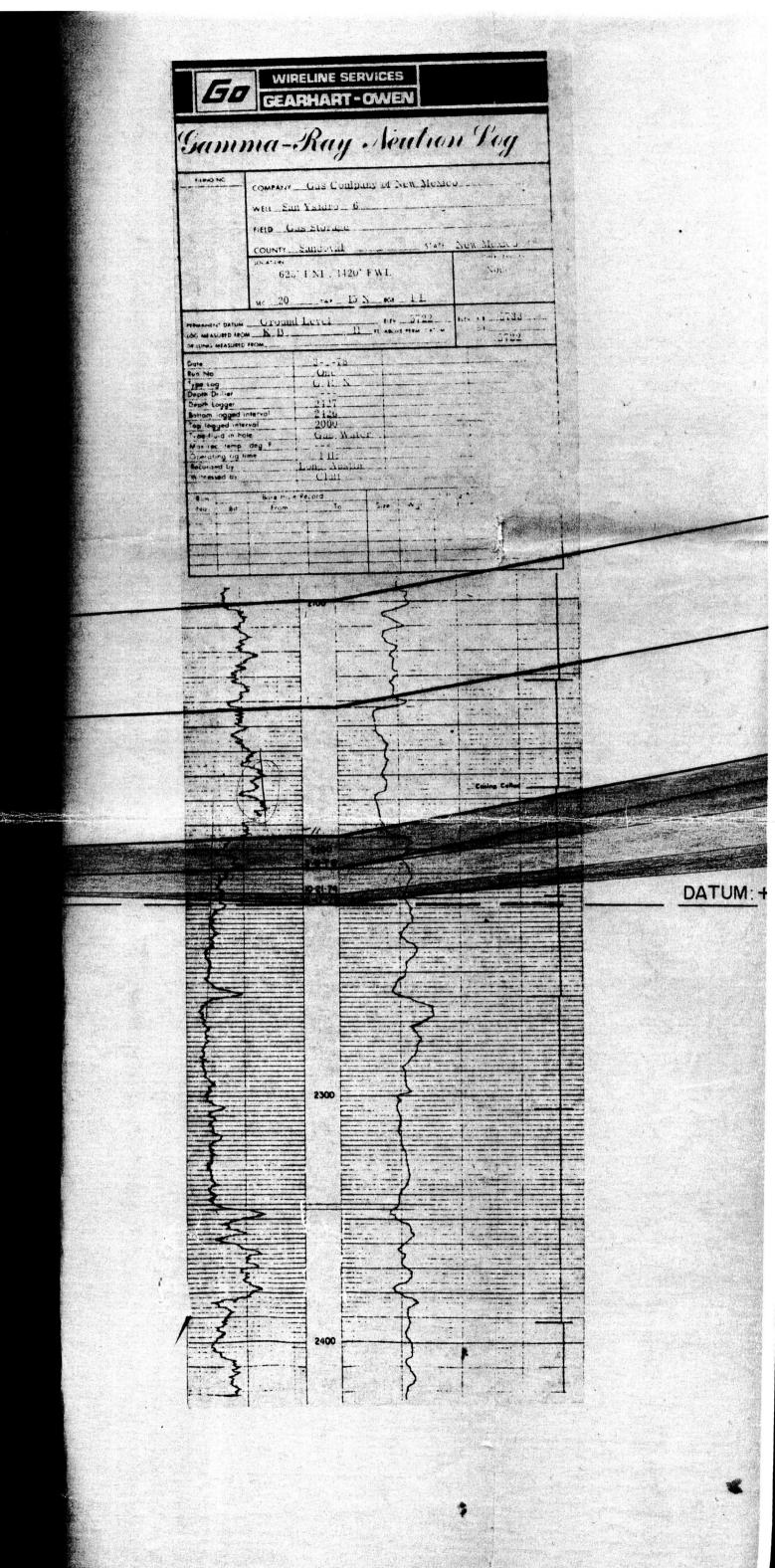
lient Sout	thern Union Produ	ection Company			
		County		State	
ield <u>No.</u>	2 San Ysidro	Lease		Well No	
ormation		Depth		Perf	
iource of Sample	Aqua Zarco No	. 2 San Ysidro S.	U.P. from Per	orations 22:	36 ft <u>- 2260</u> f
ate Collected	2-9-72	by			
		REPORT OF WA	ATER ANALYSIS	<u>i</u>	
ab. Number	P-3416	Specific Gravity	_1.011	6 pH _	6•9
		,	s at 68° F.)69		ABSENT
		BICCOLVED MINEGAL	ANALYSIS DATTEDN		
		DISSULVED MINERAL	ANALYSIS PATTERN		
20	15 10	5 0	5 1	0 15	20
Na Junjung			. e Kaalambaalambaalambaalar	<u> </u>	
100	, ,	' / ['	1	100
	անայուժուժումումումում	ավավակակական անձևոն	n bandan banka da aka da aka da ak		mbud
Ca	աժողմակակակակակակա	ավավափական սիակարը	mpuladadadahaladada	ւխահա վավավարիաիական	HIIII HCO.
		\			10
Me hulud	յ <mark>անու</mark> նունունունունունունունունունունունունուն		ախո փովովավ ալիայիա կակա	ւնահակակակակակակակ	milia so.
10		1 f l l l l l l l l	hhhhhhhhh	J. Ambartanharkarharkarh	10
		\			<u> </u>
Fe milim	antantantuuluuluuluuluuluuluuluuluuluuluuluuluul	milantindanlanlanlantindanla	aalaadaadaadaadaadaadaadaadaadaa	. <mark></mark>	min co.
10			l Indicates meq/Scale U		10
DISSOLVED SOL	IDS ANALYSIS		PRECIPITATED AND S	SUSPENDED SOLIDS A	MALYSIS
	mg,	/I mec:/I	The state of the s		mg/i
Total Solids (Ca		•	Total Undissolved Soli	ide	
Sodium (Ca	· _		Oil (Solvent Soluble)	us	
Iron (Dissolve		00.	Acid Solubles		*
Barium		00.		s	
Calcium		500 24.9		5	
Magnesium		97 8.0		s	
Chloride	20	660 75.0		\$	
Bicarbonate		650 43.5			
Carbonate		0 0.	Organic (Ignition Loss)	
Sulfate	<u>3</u> !	500 72.8	Acid Insolubles		
			Sand & Clay		
			Barium Sulfate	(Quan.)	
OTAL IRON				(Qual.)	
DLUBILITY CALC	ULATIONS				
Calainer Cort	-A- CA-LUMA A A	74.5	0.1		205
	ate Stability Index at 77	/* F	_ •91_	Scaling Tendency	POS.
	Stability at 95°F	D Onto O total	30.84	0	90 7c
	ration <u>24.9</u> meq.	(1. Calc. Solubility	30 • 8 4 meq/I.	Percent Saturation	80.73
	Stability at 95° F	// Cala Salukus	, pan 11	Passant Cat -4'-	
		· Carc Solubility	meq/i.	rercent Saturation	
FINULUS					
	rationmeq/	'I. Calc Solubility	meq/l.	Percent Saturation	

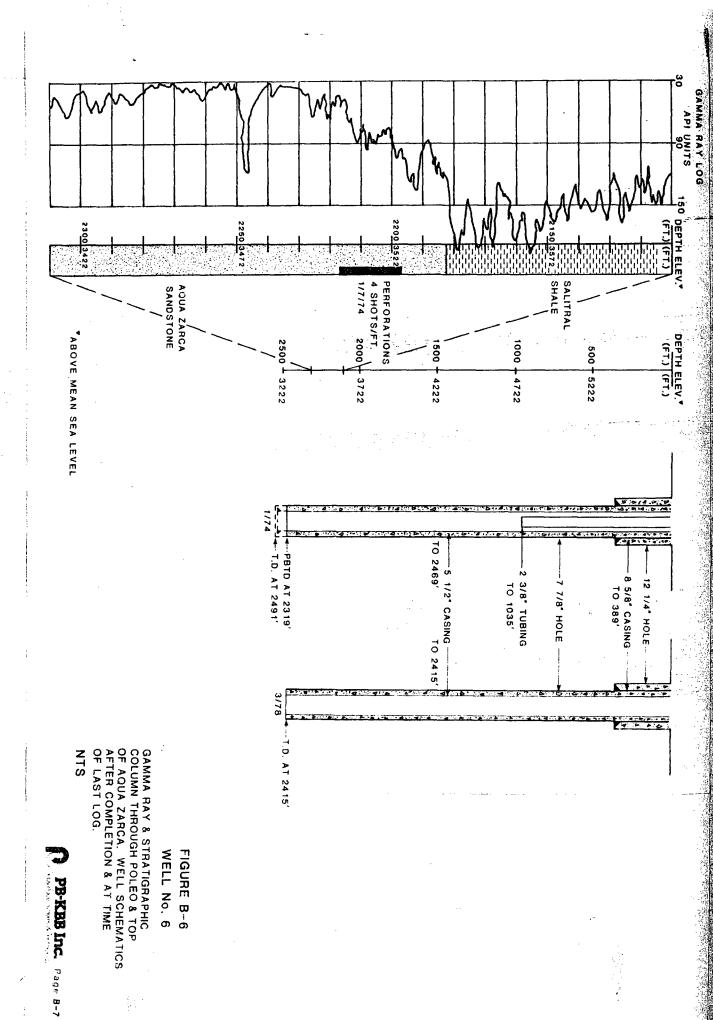
X Test No. 1 - Livestock

WATER ANALYSIS REPORT

	Test No. 2 - Domestic		,
Lab #600	•		
NAME Southern Union	Gas	DATE	3/30/72
ADDRESS Bloomfield,		CITY	New Mexico 87413
	Sample No.	1	
pH	6.5		
Total Soluble Salts: EC x 10 ⁶	700		
Parts per Million			
Total Dissolved Solids	ppm* or to	ns per a	cre foot of water
Hardness	ppm		
*ppm - parts per million			
Hardness - up to 500 pa	artment recommends the following arts per million - 500 parts per million with up million usable.		
NOTE: Some well waters should be	checked for pathological organism	s and fo	r physiological effect.
REMARKS: Your water is classified as	satisfactory		for livestock use.
Your water is classified as			for domestic use.

C. D. Leedy Extension Soils Specialist





PRODUCTION PROFITS

DIVISION OF SONICS INTERNATIONAL, INC. Petroleum Service Laboratory
DALLAS, TEXAS

Client Southern Ur	nion Production	n Company			
4444 3		County	Sandoval	State New Me:	xico
ield Wildcat		LEASE	n Ysidro 2283-2399	Well No. 1	
ormation Anua ZARCO		Depth	2203-2399	Perf	
Source of Sample D.	6-71	by		· · · · · · · · · · · · · · · · · · ·	
ate Collected	<u> </u>	оу			
,	REPO	ORT OF WA	TER ANALY	SIS	
					~ .
eb. Number		ific Gravity tivity (Ohmmeter		0111 pH • 700 Hydrogen Sulfide_	7.4 ABSENT
			ANALYSIS PATTER		
20 15	10	5 0	5	10 15	20
Ma heeluuluuleeluuluu				unhutantantantantantantantanta	
100	•	· /	,		
ce jadininajadinini	dardındardırdırd ındarlırd	unhadashkaladada	<u>սիակախախշփակակավ</u>	min iniminiminimini mi	нин нсо,
10					10
Landendendendendendenden	հավասիա ի տիսիականուհան		հումասիավասիակարկու <u>ն</u>	ահականականականական	mini so
Mg Marian Millian Marian Mar	<u>daniaalan kadaadaala</u>	imhinhindinidinid	ah udanbuda da d	minuludududududududududu	10
		\			ΙΙΨ
Fe Ladanhadanhadanhada	dandarda k adarda da d		المالميان أساليا الماليان	ու եւ հահահահահահահահահահ	utud co.
10			I Indicates meg/Sc		10
<u></u>	(Homber b	reiow ion symbo	i moreares medy ser	are Oimi	<u> </u>
DISSOLYED SOLIDS ANALY Total Solids (Calc.)	mg/l 13358	meq/I	Total Undissolved		MALYSIS mg/l
Sodium (Calc.)	3620	157.5	Oil (Solvent Solub	ile)	
Iron (Dissolved)	9	3	Acid Solubles		
Barium	540			as	
Calcium	<u>569</u> 9 0	<u>28•4</u> 7•4		as	
Magnesium Chloride	<u> 2270</u>	64.0	-	8S	
	2690	44 • 1	Sulfate	as	
Bicarbonate Carbonate	<u> </u>	0.	Organia (Innibia - 1		
Sulfate	4110	85.5	Organic (Ignition t Acid Insolubles	LOSS)	
		Y			
			Sand & Clay Barium Sulfate	(Quan.)	
OTAL IRON			Danion Gundle	(Qual.) (Qual.)	
OLUBILITY CALCULATIONS				(400.)	
Paralli Curcorviiold					
Calcium Carbonate Stability			1.46	Scaling Tendency	PØS.
Calcium Sulfate Stability at		6 -1- 6 4 4 ***	20.05 "		67 7
Concentration 2		Calc. Solubility	29 • 05 meq/1.	Percent Saturation	97.76
Barium Sulfate Stability at !		0.1. 6.4.1***			•
Concentration	meq/I.	Carc. Solubility	meq/I.	Percent Saturation	
EMARKS					
	•				

Tech:		

HALLIBURTON DISTRICT LABORATORY WATER ANALYSIS DATA SHEET

nalysis Date:_				Report No.
Gas	Company of	f New Mexico	<u> </u>	
ubmitted By			Date Received	
eli Mumber <u>s</u>	an Ysidro #8			
ocation	7		Formation	
				Data for Report
			Specific Gravity	1.009
			рн	7.21
liquot or flution	Ion En Log	Calculation .		nil
	K %ī			
5		00/5)(3.5)(.5402)		378.1
5	Mg(10	00/5)(4.4)(.3284)		288.9
5	cl <u>(10</u>	00/5)(10.0)(1.9293)	3,847.8
5		(20)		2,320.0
100	HC03(10	000/1003(61)(14.2)(2,078,9
······································	TDS			Rw 0.83 at 69 0F

NOTICE

This report is based on sound engineering practices, but because of variable well conditions and other information which must be relied upon, Halliburton makes no warranty, express or implied, as to the accuracy of the data or of any calculations or opinions expressed herein. You agree that Halliburton shall not be liable for any loss or damage whether due to negligence or otherwise arising out of or in connection with such data calculations or opinions.

PRODUCTION PROFITS

Petroleum Service Laboratory

DALLAS, TEXAS

			County		State New	Mexico	1
Field				ysidro No. 4	CI WELL NO.		<i></i>
Formation	Aqua Zar	rca Zone		260-2280	ft. Part.		1,
Source of Sample						- 10	
Date Collected		.72	by				
		DED/	ODT OF W	ATED ANALYS	10		
		KER	JAI OF W	ATER ANALYS	10		
Lab. Number	P-348	83 Spec	ific Gravity	1.0	105 pH	-	7 • 3
				ers at 68° F.)			
			-				
1		DISS	OLVED MINERA	L ANALYSIS PATTERI	4		
30		10			10 11	20	
20 Na թոգադու	15	10	•	իտք ահակարակարիականում 2	10 15		
100	,,,,,,,,,,,,, ,,,,,,,,,,,,,,,,,,,,,,,		11111				00
			1			L	
са миниции	համավավահահ	ավափակակակա	անականականակա	ակակակարգվավակաի	ահումարկայիականակ	սխոխո խոխով ԱՇՇ	1
10	111111.		Jack Market	Incharlantan Kantantanta		opinginging 1100	, 10
			\			*	
ոշ խոստու	landard and anhand	ակագ ետկան ական	<u> մահահահահահան</u>		ուսո համասիակական		
10	landard and and and	andera Landandan	harkarlanlardinibirk	landanianian landa	ntmetantimbariantmeta		10
			l l		•	لبا	
				androdendendendendendende		111160	
						adontantantast LU:	
1) તાલુકામાં તાલુકામાં આ તાલુકા તા તાલુકા તાલુકામાં આવેલા તાલુકા તાલ					,	
Fe milimbin	ોમમાં તાલે તમે તમા કે તમા કે તમા છે. 			ol Indicates meq/Sca		,	0
1)મહાં લાત કેલ્લો માટે હતો. 					,	
10				ol Indicates meq/Sca	le Unit)	1	0
1		(Number)	Below Ion Symb		le Unit)	1	
DISSOLVED SOLID	S ANALYSIS	(Number)		ool Indicates meq/Sca	le Unit) D. SUSPENDED SC	1	0
DISSOLVED SOLID	S ANALYSIS	(Number) mg/113227	Below Ion Symb meq/I	PRECIPITATED ANI Total Undissolved S	le Unit) D. SUSPENDED SC Solids	1	
DISSOLVED SOLID Total Solids (Calc. Sodium (Calc.	S ANALYSIS)	(Number) mg/1132273830	meq/1	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble	le Unit) D. SUSPENDED SC Solids	1	
DISSOLVED SOLID	S ANALYSIS)	mg/l13227383019	Below Ion Symb meq/I	PRECIPITATED ANI Total Undissolved S	le Unit) D. SUSPENDED SC Solids	1	
DISSOLVED SOLID Total Solids (Calc. Sodium (Calc.	S ANALYSIS)	mg/l13227383019	meq/1	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron	le Unit) D SUSPENDED SC Solids E)	DLIDS ANALYSIS	
Total Solids (Calc. Sodium (Calc. Iron (Dissolved	S ANALYSIS)	mg/l13227383019	meq/1 166.4 -7 -21.2	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron	le Unit) D SUSPENDED SC Solids P)	DLIDS ANALYSIS	
Total Solids (Calc. Sodium (Calc. Iron (Dissolved Barium	S ANALYSIS)	mg/l13227383019	meq/I 166 • 4 -7	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium	le Unit) D SUSPENDED SC Solids E)	DLIDS ANALYSIS	
Total Solids (Calc. Sodium (Calc. Iron (Dissolved Barium Calcium	S ANALYSIS)	mg/113227383019425	meq/I 166.4	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium	le Unit) D SUSPENDED SC Solids e) as as	DLIDS ANALYSIS	
. DISSOLYED SOLID Total Solids (Calc. Sodium (Calc. Iron (Dissolved Barium Calcium Magnesium	S ANALYSIS)	mg/1	meq/I 166.4	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium	le Unit) D SUSPENDED SC Solids E) AS AS AS	DLIDS ANALYSIS	
Total Solids (Calc. Sodium (Calc. Iron (Dissolved Barium Calcium Magnesium Chloride	S ANALYSIS)	mg/1	meq/I 166.4	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate	le Unit) D SUSPENDED SC Solids e) as as as as	DLIDS ANALYSIS	
Total Solids (Calc. Sodium (Calc. Iron (Dissolved Barium Calcium Magnesium Chioride Bicarbonate	S ANALYSIS)	mg/1	meq/I 166.4 7 21.2 26.1 42.5 0.	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium	le Unit) D SUSPENDED SC Solids e) as as as as	DLIDS ANALYSIS	
Total Solids (Calc. Sodium (Calc. Iron (Dissolved Barium Calcium Magnesium Chloride Bicarbonate Carbonate	S ANALYSIS)	mg/11322738301942563270025900	meq/I 166.4 7 21.2 26.1 42.5	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo Acid Insolubles	le Unit) D SUSPENDED SC Solids e) as as as as	DLIDS ANALYSIS	
Total Solids (Calc. Sodium (Calc. Iron (Dissolved Barium Calcium Magnesium Chloride Bicarbonate Carbonate	S ANALYSIS)	mg/11322738301942563270025900	meq/I 166.4 7 21.2 26.1 42.5 0.	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Le Acid Insolubles Sand & Clay	le Unit) D SUSPENDED SC Solids e) as as as as as	DLIDS ANALYSIS	
Total Solids (Calc. Sodium (Calc. Iron (Dissolved Barium Calcium Magnesium Chloride Bicarbonate Carbonate Sulfate	S ANALYSIS)	mg/11322738301942563270025900	meq/I 166.4 7 21.2 26.1 42.5 0.	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo Acid Insolubles	le Unit) D SUSPENDED SC Solids e) as as as as (Qu	DLIDS ANALYSIS	mg/1
Total Solids (Calc. Sodium (Calc. Iron (Dissolved Barium Calcium Magnesium Chloride Bicarbonate Carbonate Sulfate	S ANALYSIS))	mg/11322738301942563270025900	meq/I 166.4 7 21.2 26.1 42.5 0.	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Le Acid Insolubles Sand & Clay	le Unit) D SUSPENDED SC Solids e) as as as as (Qu	DLIDS ANALYSIS	mg/1
Total Solids (Calc. Sodium (Calc. Iron (Dissolved Barium Calcium Magnesium Chloride Bicarbonate Carbonate Sulfate	S ANALYSIS))	mg/11322738301942563270025900	meq/I 166.4 7 21.2 26.1 42.5 0.	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Le Acid Insolubles Sand & Clay	le Unit) D SUSPENDED SC Solids e) as as as as (Qu	DLIDS ANALYSIS	mg/I
Total Solids (Calc. Sodium (Galc. Iron (Dissolved Barium Calcium Magnesium Chloride Bicarbonate Carbonate Sulfate TOTAL IRON SOLUBILITY CALCU	S ANALYSIS))) (LATIONS	mg/l	meq/I 166.4 7 21.2 26.1 42.5 0.	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Le Acid Insolubles Sand & Clay Barlum Sulfate	le Unit) D SUSPENDED SC Solids as as as as (Qu (Qu	DLIDS ANALYSIS	mg/1
Total Solids (Calc. Sodium (Calc. Iron (Dissolved Barium Calcium Magnesium Chloride Bicarbonate Carbonate Sulfate TOTAL IRON SOLUBILITY CALCU	S ANALYSIS))) (LATIONS e Stability Ind	mg/l	meq/I 166.4 7 21.2 26.1 42.5 0.	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Le Acid Insolubles Sand & Clay	le Unit) D SUSPENDED SC Solids e) as as as as (Qu	DLIDS ANALYSIS	mg/1
Total Solids (Calc. Sodium (Galc. Iron (Dissolved Barium Calcium Magnesium Chloride Bicarbonate Carbonate Sulfate TOTAL IRON SOLUBILITY CALCU Calcium Sulfate S	S ANALYSIS)))) (LATIONS e Stability Inditability at 95°	mg/l 13227 3830 19	meq/1 166.4 -7 -1.2 -5.2 -76.1 42.5 0. -74.9	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Le Acid Insolubles Sand & Clay Barium Sulfate	Solids as as as as SSSSSSSSSSSSSSSSSSSS	an.)	mg/1
Total Solids (Calc. Sodium (Calc. Iron (Dissolved Barium Calcium Magnesium Chloride Bicarbonate Carbonate Sulfate TOTAL IRON SOLUBILITY CALCU Calcium Sulfate S Concentrate	S ANALYSIS)))) iLATIONS e Stability Ind tability at 95° tion 21.	mg/1	meq/1 166.4 -7 -1.2 -5.2 -76.1 42.5 0. -74.9	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Le Acid Insolubles Sand & Clay Barlum Sulfate	le Unit) D SUSPENDED SC Solids as as as as (Qu (Qu	an.)	mg/1
Total Solids (Calc. Sodium (Calc. Sodium (Calc. Iron (Dissolved Barium Calcium Magnesium Chloride Bicarbonate Carbonate Sulfate TOTAL IRON SOLUBILITY CALCU Calcium Sulfate S Concentral Barium Sulfate St	S ANALYSIS (LATIONS e Stability Ind tability at 95° tion 21.6	mg/l	meq/1 166.4 -7 -1.2 5.2 76.1 42.5 0. 74.9	PRECIPITATED AND Total Undissolved S Oil (Solvent Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo Acid Insolubles Sand & Clay Barlum Sulfate	le Unit) D SUSPENDED SC Solids as as as as SSS) (Qu (Qu Scaling Tendo	an.) ency P0S	mg/1
Total Solids (Calc. Sodium (Calc. Sodium (Calc. Iron (Dissolved Barium Calcium Magnesium Chloride Bicarbonate Carbonate Sulfate TOTAL IRON SOLUBILITY CALCU Calcium Sulfate S Concentral Barium Sulfate St	S ANALYSIS)))) iLATIONS e Stability Ind tability at 95° tion 21.	mg/l	meq/1 166.4 -7 -1.2 5.2 76.1 42.5 0. 74.9	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Le Acid Insolubles Sand & Clay Barium Sulfate	Solids as as as as SSSSSSSSSSSSSSSSSSSS	an.) ency P0S	mg/1

PRODUCTION PROFITS

DIVISION OF SONICS INTERNATIONAL, INC.

Petroleum Service Laboratory
DALLAS, TEXAS

Field		Lease San	Ysidro No. 4	C. Well No.	
Formation Aqua	Zarca Zone		60-2280	ft. Pert.	CU
Source of Sample					
Date Collected Rec:	3-6-72	by			
	proc	DT OF WA	TED ANALVO	10	
	REPO	JAI OF WA	ATER ANALYS	10	
Lab. Number P.	-3483 Speci	fic Gravity	1.01	LOS pH	7.3
Total Dissolved Solids					ABSENT
•	Diss	DLVED MINERAL	. ANALYSIS PATTERN	<u>4</u>	
20 15	10	5 Q	5	10 15	20
		•	•		
100			Li i i i i i i	t. d. e.	100
					
Ca sudendendenden	laalaalaalaabadaalaalaa	kurlandan barbarbarb	ndandanlanksekadanlanlanla	dadadadadadadadadada	HHHHH HCO.
10	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				10
		\ \ \	, \		
Mg HILLIHAN HILLIHAN			ndandanlanlanlanlandanlar	ulun luuluuluuluuluu kuluulu	elimini so.
10	,,,,,,,,				10
		¥		•	
Fe Junionhambanian				ահում համապետ համատ համարհո	. L. J. Co.
i a finiminanananan			· ·	•	3
1					
	(Number I	selow ion Symbo	ol Indicates meg/Scal	le Unit)	10
	(Number I	selow Ion Symbo	ol Indicates meg/ Scal	(e Unit)	10
		selow ion Symbo			
DISSOLVED SOLIDS ANAI	LYSIS	·		D SUSPENDED SOUDS	ANALYSIS
		neq/I			ANALYSIS
	LYSIS	·		o suspended solids	ANALYSIS
DISSOLVED SOLIDS ANA	LYSIS mg/l	·	PRECIPITATED AND	D SUSPENDED SOLIDS	ANALYSIS
DISSOLYED SOLIDS ANA Total Solids (Calc.)	LYSIS mg/! 13227	meq/i	PRECIPITATED AND	D SUSPENDED SOLIDS	ANALYSIS
DISSOLVED SOLIDS ANAI Total Solids (Calc.) Sodium (Calc.)	LYSIS mg/I 13227 3830	meq/I 166•4	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble	D SUSPENDED SOLIDS	ANALYSIS
DISSOLVED SOLIDS ANAI Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved)	mg/!	meq/I 166•4	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron	D SUSPENDED SOUDS Solids	ANALYSIS mg
DISSOLVED SOLIDS ANAI Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barlum Calcium	mg/!	meq/1 166.4 -7 -1 21.2	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium	Solids 25 285 285	ANALYSIS mg
DISSOLVED SOLIDS ANAI Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barlum Calcium Magnesium	mg/!	meq/1 166.4 -7 -1 21.2 5.2	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium	O SUSPENDED SOLIDS Solids 9) 85 85 85	ANALYSIS mg
DISSOLVED SOLIDS ANAI Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barlum Calcium Magnesium Chloride	mg/! 13227 3830 19 425 63 2700	meq/I 166.4 -7 -1.2 5.2 76.1	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium	Solids 25 285 285	ANALYSIS mg
DISSOLVED SOLIDS ANAI Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barlum Calcium Magnesium Chloride Bicarbonate	mg/! 13227 3830 19 425 63 2700 2590	meq/I 166.4 -7 -1.2 5.2 76.1 42.5	Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate	SUSPENDED SOUDS Solids 8 85 85 85 85 85	ANALYSIS mg
DISSOLVED SOLIDS ANAI Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barlum Calcium Magnesium Chloride Bicarbonate Carbonate	mg/l 13227 3830 19	meq/I 166.4 -7 -21.2 5.2 76.1 42.5 0.	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo	SUSPENDED SOUDS Solids 8 85 85 85 85 85	ANALYSIS mg
DISSOLVED SOLIDS ANAI Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barlum Calcium Magnesium Chloride Bicarbonate	mg/! 13227 3830 19 425 63 2700 2590	meq/I 166.4 -7 -1.2 5.2 76.1 42.5	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo Acid Insolubles	SUSPENDED SOUDS Solids 8 85 85 85 85 85	ANALYSIS mg
DISSOLVED SOLIDS ANAI Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barlum Calcium Magnesium Chloride Bicarbonate Carbonate	mg/l 13227 3830 19	meq/I 166.4 -7 -21.2 5.2 76.1 42.5 0.	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo Acid Insolubles Sand & Clay	SUSPENDED SOUDS Solids (a) (a) (a) (a) (b) (c) (c) (c) (c) (c) (c) (c	ANALYSIS
DISSOLVED SOLIDS ANAI Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barlum Calcium Magnesium Chloride Bicarbonate Carbonate Sulfate	mg/l 13227 3830 19	meq/I 166.4 -7 -21.2 5.2 76.1 42.5 0.	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo Acid Insolubles	SUSPENDED SOUDS Solids as as as as (Quan.)	ANALYSIS
DISSOLYED SOLIDS ANA Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barium Calcium Magnesium Chloride Bicarbonate Carbonate Sulfate TOTAL IRON	mg/!	meq/I 166.4 -7 -21.2 5.2 76.1 42.5 0.	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo Acid Insolubles Sand & Clay	SUSPENDED SOUDS Solids as as as as (Quan.)	ANALYSIS
DISSOLVED SOLIDS ANAI Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barlum Calcium Magnesium Chloride Bicarbonate Carbonate Sulfate	mg/!	meq/I 166.4 -7 -21.2 5.2 76.1 42.5 0.	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo Acid Insolubles Sand & Clay	SUSPENDED SOUDS Solids as as as as (Quan.)	ANALYSIS
DISSOLYED SOLIDS ANA Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barium Calcium Magnesium Chloride Bicarbonate Carbonate Sulfate TOTAL IRON SOLUBILITY CALCULATION	mg/!	meq/I 166.4 -7 -21.2 5.2 76.1 42.5 0.	PRECIPITATED AND Total Undissolved S Oil (Solvent Solubles Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo Acid Insolubles Sand & Clay Barlum Sulfate	Solids as as as (Quan.) (Qual.)	ANALYSIS
DISSOLYED SOLIDS ANA Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barium Calcium Magnesium Chloride Bicarbonate Carbonate Sulfate TOTAL IRON SOLUBILITY CALCULATION Calcium Carbonate Stabili	mg/!	meq/I 166.4 -7 -21.2 5.2 76.1 42.5 0.	PRECIPITATED AND Total Undissolved S Oil (Solvent Soluble Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo Acid Insolubles Sand & Clay	SUSPENDED SOUDS Solids as as as as (Quan.)	ANALYSIS
DISSOLYED SOLIDS ANA Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barium Calcium Magnesium Chloride Bicarbonate Carbonate Sulfate TOTAL IRON SOLUBILITY CALCULATION Calcium Carbonate Stabilit Calcium Sulfate Stability	mg/!	meq/1 166.4 -7 -1.2 5.2 76.1 42.5 0. 74.9	PRECIPITATED AND Total Undissolved S Oil (Solvent Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo Acid Insolubles Sand & Clay Barlum Sulfate	Solids as as as (Quan.) (Qual.)	ANALYSIS mg
DISSOLYED SOLIDS ANA Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barium Calcium Magnesium Chloride Bicarbonate Carbonate Sulfate TOTAL IRON SOLUBILITY CALCULATION Calcium Carbonate Stabili	mg/!	meq/1 166.4 -7 -1.2 5.2 76.1 42.5 0. 74.9	PRECIPITATED AND Total Undissolved S Oil (Solvent Solubles Acid Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo Acid Insolubles Sand & Clay Barlum Sulfate	Solids as as as (Quan.) (Qual.)	ANALYSIS mg
DISSOLYED SOLIDS ANA Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barium Calcium Magnesium Chloride Bicarbonate Carbonate Sulfate TOTAL IRON SOLUBILITY CALCULATION Calcium Carbonate Stabilit Calcium Sulfate Stability	mg/! 13227 3830 19 425 63 2700 2590 0 3600 ity Index at 77° F at 95° F 21 • 2 meq/!.	meq/1 166.4 -7 -1.2 5.2 76.1 42.5 0. 74.9	PRECIPITATED AND Total Undissolved S Oil (Solvent Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo Acid Insolubles Sand & Clay Barlum Sulfate	Solids asasss Soss) (Quan.)(Qual.)	ANALYSIS mg
DISSOLVED SOLIDS ANAL Total Solids (Calc.) Sodium (Calc.) Iron (Dissolved) Barium Calcium Magnesium Chloride Bicarbonate Carbonate Sulfate TOTAL IRON SOLUBILITY CALCULATION Calcium Carbonate Stability Concentration	mg/! 13227 3830 19 425 63 2700 2590 0 3600 ity Index at 77° F at 95° F 21 • 2 meq/!.	meq/I 166.4 -7 -1 21.2 5.2 76.1 42.5 0. 74.9	PRECIPITATED AND Total Undissolved S Oil (Solvent Solubles Iron Calcium Magnesium Sulfate Organic (Ignition Lo Acid Insolubles Sand & Clay Barlum Sulfate	Solids asasss Soss) (Quan.)(Qual.)	ANALYSIS

APPLICATION OF AUTHORIZATION TO INJECT

PNM GAS RESOURCES

SAN YSIDRO #6

PART XII. STATEMENT OF GEOLOGICAL ENGINEERING DATA

I HAVE EXAMINED ALL AVAILABLE GEOLOGIC AND ENGINEERING DATA WITH RESPECT TO OPEN FAULTS OR ANY OTHER HYDROLOGIC CONNECTION BETWEEN THE DISPOSAL ZONE AND ANY UNDERGROUND SOURCE OF DRINKING WATER.

FIGURE #1 SHOWS A STRUCTURE MAP OF THE SAN YSIDRO UNDERGROUND GAS STORAGE SITE. THE MAP THAT DEPICTS THE WELLS AND THE IDENTIFIED FAULTS IN THE IMMEDIATE AREA.

REPORT #1 -- FOLDS & FAULTS

THIS REPORT WAS COMPLIED BY PB-KBB INC. (ENGINEERING CONSULTING COMPANY) IN JULY 1984 FROM A REPORT ENTITLED "SAN YSIDRO UNDERGROUND GAS STORAGE FIELD". THIS REPORT OUTLINES HOW THE FOLDING AND FAULTING RESULTED IN THE SAN YSIDRO UNDERGROUND GAS STORAGE FOR GAS TO BE STORED.

REPORT #2 -- RESERVOIR PERFORMANCE ANALYSIS

THIS REPORT WAS COMPILED BY INTERA PETROLEUM PRODUCTION INC. (ENGINEERING COMPANY) IN APRIL 1993. THIS REPORT ENTITLED "EVALUATION AND RESERVOIR SIMULATION OF THE SAN YSIDRO UNDERGROUND GAS STORAGE RESERVOIR" INDICATES THAT THERE ARE FAULTS IN THE IMMEDIATE AREA OF THE INJECTED ZONE. THE MAIN CONCLUSION OF THE ANALYSIS INDICATED THAT THERE WOULD BE NO GAS LOST ACROSS THE EAST LYING FAULT SO LONG AS THE GAS STORED IN THE RESERVOIR IS LESS THAN 5.6 BCF.

PRESENTLY, PNM IS LIMITING THE WORKING GAS TO ONLY 1.2 BCF IN THE UNDERGROUND GAS STORAGE SITE.

JOEL LEVINE

SENIOR ENGINEER

DATE

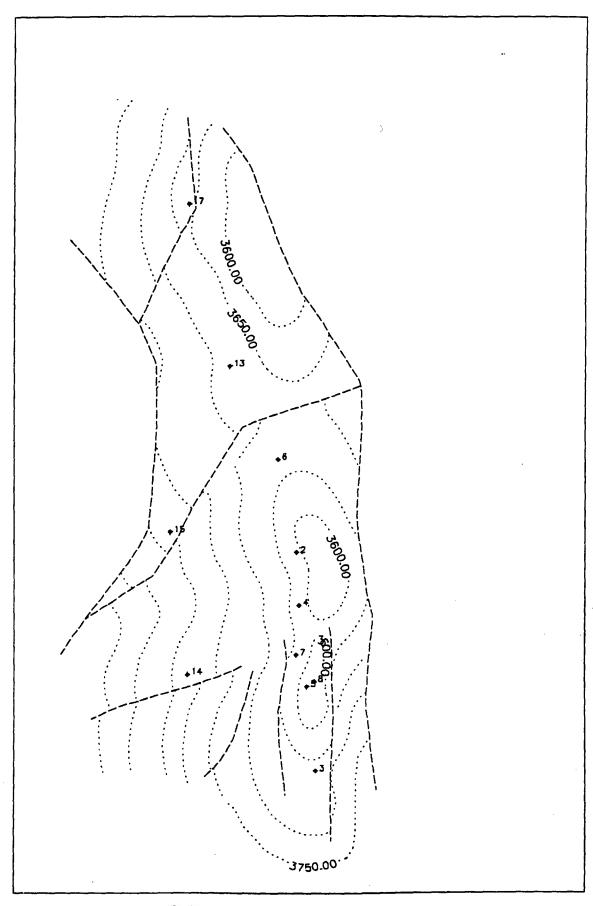


FIGURE 1. STRUCTURE MAP

1. Folds/Faults

Tectonic activity during the Laramide Orogeny is responsible for most of the structural change in the Las Milpas area since deposition of the Morrison Formation which is the uppermost strata in most of the field.

Laramide activity began with gradual drifting of the Colorado Plateau to the northeast (Kelley^{6]}). Conditions for this were supplied in two forms. Compression in the Cordilleran foldbelt west and south of the plateau provided a force in the northeast direction. On the extreme eastern side of the plateau lay the Rocky Mountains. At the junction of the two, there existed the north-trending Pennsylvanian Penasco Uplift which was located at approximately the same position as the present Nacimiento Uplift. This may have served as a line of weakness along which movement could occur. As plateau movement was taking place a right-lateral shift began.

A right-lateral shift is simply a horizontal rotation of a structure (in this case, the Colorado Plateau) in the clockwise direction. Northwest-trending folds would be the first development phase of this shift. The San Ysidro anticline and the Canada de Las Milpas syncline in the Las Milpas area were probably part of this folding.

With continued movement of the plateau, tension fractures showing a northeast trend developed perpendicular to the folds. At this point in the tectonic activity, interpretation becomes complex. One interpretation (Kelley⁶) says that the tension fractures continued development immediately into northeast-trending faults and were part of late Laramide activity. Reutschilling¹¹, though, hypothesized that further development of the fractures ceased, along with ter-



mination of movement of the Colorado Plateau. These fractures were then reactivated during Miocene development of the Rio Grande rift. Regardless of the time of development of the fractures, many of the northeast trending faults in and around the Las Milpas area and the Las Milpas fault itself, were probably developed sometime in this time frame.

After development of any faults in the Las Milpas area, particularly the Las Milpas Fault, reactivation of these faults (if it occurred) could have developed in several ways. One cause could have been earthquake activity. Whether significant earthquake activity has occurred since the start of the San Ysidro project would be an important question. An earthquake recorded on January 5, 1976, with its epicenter approximately one hundred miles northwest of the project may have been significant.

A table was complied by the New Mexico Bureau of Mines and Mineral Resources on earthquake activity in New Mexico from 1962 - 1977 (Sanford, et. al., pp. 10-11¹³). Magnitudes ranging from 1.5 - 4.29 on a scale of 12 were recorded (therefore, low activity). The one that occurred northwest of the gas storage area had a magnitude of 4.1. Approximately 95 stations in New Mexico and the surrounding states recorded the earthquake. An average of 10 stations with a high of 47 stations recorded those in the remainder of the table. Figure 5, page 16, shows the location of this earthquake.

Theoretically, earthquake activity can cause a fault activation or reactivation even if only by a few inches. The January 1976 earthquake apparently did not have this affect on those faults in the Las Milpas area. Well pressures in the area had previously started their decline and no drastic



change was noted in 1976. If significant fault movement occurred at the storage facility, one would expect a noticeable change in pressures since the wells are surrounded by fault zones. That earthquake does not appear to have directly affected the field pressures.

2. Surface

PB-KBB Inc. has reviewed Woodward's¹⁶ report on surface geology and find it to be the most comprehensive one for the Las Milpas area. The geologic map contained with the report confirms the presence of a fault on the east side of the storage structure. Several faults are shown to the south which should be the northern portion of the Rio Puerco Fault Zone. No faults are shown lying directly between well #17 and #13.

3. Subsurface

Tops of all formations occur at different elevations at each one of the wells in and around the storage area as shown from geophysical well logs. As one example, the top of the Aqua Zarca is not continuous at one elevation. On the west side of the anticlinal axis, the beds dip gently to the southwest as shown on Figure 6, page 18. On the east side of the anticline, the formation rolls over towards the fault as shown by well #5 and #8 in the same figure. This rollover was also shown in holes that were later drilled to +500' into the Chinle east of the original 12 holes. Though this cross-section shows a typical arrangement for bedding due to an anticline, a cross-section along the N-S axis is not quite so "typically" uniform.

Along the axis of the anticline, the Aqua Zarca alternates high-low-high-low, etc., from northwest to southeast along a datum of 3500' elevation. A N-S cross-section using geophysical well logs shows the top of the Aqua Zarca (Figure 7, page 19).



Differences in elevations may have existed prior to Aqua Zarca deposition or occurred due to later folding or faulting of the structure. PB-KBB Inc. has found no evidence that faulting had much to do with elevation difference between holes.

From conclusions drawn on geologic studies in the surrounding area, faulting in the Las Milpas area either occurred prior to Aqua Zarca deposition or during late or post Laramide Orogeny which took place after deposition of the Upper As shown in Figure 7, page 19, the Aqua Zarca Morrision. shows its highest elevation in well #17. If faulting after deposition was significant, the Morrison Formation in the upper portion of the hole should also be higher than in the other wells in the field. This is not the case. ation of drill cutting reports shows the Morrison is lower or of the same elevation in well #17 than in the other holes along the axis of the anticline. Given both the time faulting was to have occurred and examination of the drill cutting reports, the evidence points towards no significant faulting interrupting the bedding along the axis of the This would rule out a fault between wells #17 anticline. and #6 or #13. (See Appendix A.)

After deposition of the Aqua Zarca was complete, the structure had its high at the present location of well #17. As the overlying formations were being deposited in the Las Milpas area, they grew to a greater thickness to the south of well #17. In other words, that area to the south (which contains the present locations of the other storage field wells) lay in a basin relative to well #17.

When later Morrison deposition began, the elevation of the area around the present location of well #17 was then at or below the elevation of the area to the south.



RESERVOIR PERFORMANCE ANALYSIS

Before presenting a detailed analysis of the performance of the Las Milpas gas storage reservoir, one point must be stressed. In the Model Calibration section, gas loss across the Las Milpas fault was mentioned as a key factor. While it is Intera's opinion that this gas loss in indeed occurring across the fault, it is quite possible the loss could be occurring in some other fashion such as vertically through fractures in the reservoir. Given the available field data, it is impossible to determine the actual cause of the lost gas with 100% certainty. Further, it is very unlikely that the lost gas will ever be recovered, whatever the cause. What is important, is to provide some mechanism for this gas loss in the simulation model so that reservoir performance can be adequately described. This has been done by allowing gas flow across the Las Milpas fault.

Figure 32 illustrates the gas in place in the storage reservoir versus time and the gas lost across the spillpoint over time. The spillpoint is defined as the large fault running predominately west to east through the center of the field between Wells 6 and 13 (Figure 16). Thus, the "storage reservoir" would then be that part of the field south of this fault. To this point, discussion has concentrated primarily on gas lost across the Las Milpas fault. However, because of the spillpoint and the observed breakthrough of gas at Well 17, gas is obviously being lost from the storage reservoir to the north, as well. Figure 32 shows that this gas loss was not significant, though, and was confined to the one event in 1975 which led to the observed gas in Well 17.

There are several key points of interest in Figure 32. First, the plot on the left shows the magnitude of the gas loss across the spillpoint to be approximately 250 MMCF. This loss of gas occurred when the volume of gas in the storage reservoir exceeded 5.6 BCF, as indicated by the maximum point on the plot on the right. In addition, from 1980 on the minimum value of gas in place in the storage reservoir is approximately 3.6 BCF. Therefore, the base gas volume in the storage reservoir is 3.6 BCF and the maximum possible useable working volume is roughly 2.0 BCF (5.6-3.6=2.0). The large value of base gas is due primarily to the high residual gas saturation of 41% associated with the Aqua Zarca formation.

DECEMBER 2, 2004

WILL JONES ENGINEER NEW MEXICO OIL CONSERVATION DIVISION 1220 S. ST. FRANCIS DR. SANTA FE, NM. 87505

RE: PRODUCED WATER INJECTION
PUBLIC SERVICE COMPANY OF NEW MEXICO
SAN YSIDRO GAS STORAGE PROJECT
SANDOVAL COUNTY, NM.

DEAR MR. JONES;

THIS LETTER IS BEING SENT AS A THIRD PARTY EVALUATION OF THE FEASIBILITY OF WATER REINJECTION AT PNM's SAN YSIDRO GAS STORAGE PROJECT. THE PURPOSE IS TO PROVIDE ADDITIONAL DISCUSSION AND SUPPORTING DOCUMENTATION FOR THE APPROVAL OF PNM's INJECTION PERMIT APPLICATION.

BACKGROUND:

THE FOLLOWING INFORMATION WAS PROVIDED BY PNM AND IS THE BASIS OF THIS ANALYSIS:
SAN YSIDRO GAS STORAGE PROJECT IS LOCATED IN TOWNSHIP 15N RANGE 1E, SANDOVAL COUNTY, NEW MEXICO.
EXISTING WELLS ARE LOCATED IN SECTIONS 17, 18, 19, 20 AND 29. ATTACHMENT NO.
APPROXIMATELY 450 MMSCF OF GAS IS PRESENTLY STORED AT THE PROJECT.
STORED GAS IS CONTAINED IN THE AQUA ZARCA FORMATION. ATTACHMENT NO. 2
PRESENT RESERVIOR PRESSURE IS APPROXIMATELY 300 PSIA.
PNM LINE PRESSURES SEASONALLY RANGE FROM 400 TO 550 PSIA.
250 MMSCF MAY BE PRODUCED WITH A 75 PSI DRAWDOWN OF THE RESERVIOR.
AVERAGE COST OF STORED GAS IS \$3.32/MSCF.
WELL #5 WILL BE THE PRODUCING WELL DURING THE BLOWDOWN RECOVERY PHASE.
WELL #5 IS LOCATED ON A RELATIVE STRUCTURAL HIGH IN THE SOUTHERN PORTION OF THE FIELD. ATTACHMENT NO. 3.

-----THE AQUA ZARCA FORMATION IS CUT BY SEVERAL PRIMARY FAULTS TRENDING

PURPOSE:

THE SAN YSIDRO GAS STORAGE PROJECT IS IN ITS FINAL STAGES OF UTILITY. THE IMMEDIATE PLAN IS TO BLOWDOWN THE RESERVIOR IN AN EFFORT TO RECOVER THE MAXIMUM QUANTITY OF STORED GAS. THE PRESENT MODE OF OPERATION IS TO PRODUCE WELL #5 BY COMPRESSING THE GAS FOR DELIVERY TO THE PNM LINE AND PUMPING THE PRODUCED WATER TO AN EVAPORATION POND LOCATED ON THE LEASE. AT THIS TIME THE RATE OF EVAPORATION IS NOT SUFFICIENT TO ALLOW CONTINUOUS PRODUCTION. THE NEED FOR AN ALTERNATIVE METHOD OF WATER DISPOSAL IS EVIDENT. ON LEASE REINJECTION OF THE PRODUCED WATER IS THE MOST COST EFFICIENT SOLUTION.

DISCUSSION:

DUE TO THE UNDULATING AND FAULTED NATURE OF THE AQUA ZARCA STRUCTURE, REINJECTION OF THE PRODUCED WATER WOULD BE BEST SERVED BY POSITIONING THE INJECTION WELL AS FAR AS POSSIBLE FROM THE PRODUCING WELL. THIS WOULD MINIMIZE THE POSSIBILITY OF PREMATURE INJECTED WATER BREAKTHROUGH AND WATER CYCLING. TO ACCOMPLISH THIS, WELLS #6 #13 OR #17 WERE CONSIDERED AS CANDIDATES FOR USE AS THE INJECTION WELL. DUE TO THE FACT THAT FLOWLINES PRESENTLY EXIST BETWEEN WELLS #5 AND #6, THE DECISION WAS MADE TO PERMIT WELL #6 AS THE INJECTION WELL.

AS AN ADDITIONAL BENEFIT, WATER INJECTED AT WELL #6 WOULD HAVE TO MIGRATE THROUGH STRUCTURAL LOWS AT WELLS #13 AND #2. VERTICAL PERMEABILITY IN THE AQUA ZARCA IS MODERATE AND MAY ALLOW SOME GRAVITY SEGREGATION OF WATER AND GAS. THIS COULD IN EFFECT CREATE A BOTTOM WATER ASSIST AND MAY IMPROVE THE ECONOMICS OF THE PROJECT AND INCREASE THE ULIMATE RECOVERY OF GAS.

THE WATER INJECTION SHOULD NOT BE CONSIDERED AS A PRESSURE MAINTENANCE PROGRAM DUE TO THE FACT THAT ON A NET BASIS, ONLY THE GAS WILL BE REMOVED FROM THE SYSTEM. MASS BALANCE CALCULATIONS OF THE RESERVIOR WILL SHOW CONTINUOUSLY DECREASING PRESSURES.

AS A RESERVOIR CONSIDERATION, ABANDONMENT PRESSURE CAN NOT BE ESTABLISHED AT THIS TIME. PROJECT LIFE WILL BE DICATED BY ECONOMICS. DUE TO THE VOLATILE NATURE OF GAS PRICES AND THE INABILITY TO PRECISELY PREDICT GAS AND WATER PRODUCTION RATES, THE ECONOMIC LIMIT OF THIS PROJECT WILL BE DETERMINED BY EQUATING FUTURE GAS REVENUE AND OPERATING EXPENSES.

ALL NECESSARY PRODUCTION EQUIPMENT IS PRESENTLY LOCATED AT WELL #5 AND FLOWLINES PRESENTLY EXIST BETWEEN WELLS #5 AND #6. INCREMENTAL WORK AND EQUIPMENT NEEDED TO COMPLETE THE PROJECT WILL INCLUDE THE FOLLOWING:

------APPROVAL OF STATE WATER DISPOSAL PERMIT.
------ADEQUATE PUMPING FACILITIES TO TRANSPORT
PRODUCED WATER FROM WELL #5 TO WELL #6.
------AT LEAST 48 HRS WATER STORAGE AT WELL #6. (BASED ON ANTICIPATED WATER
PRODUCTION RATES)
------INSTALL INJECTION PACKER AND CONDUCT MECHANICAL INTEGRITY TEST ON

WELL #6.

-----CONDUCT INJECTIVITY TEST ON WELL #6 TO ESTABLISH INJECTION PUMP REQUIREMENTS.

-----INSTALL INJECTION FACILITIES AT WELL #6

REGULATORY CONSIDERATIONS;

THE SAN YSIDRO LEASES WERE OBTAINED BY PNM SPECIFICALLY FOR THE GAS STORAGE PROJECT. THERE ARE NO OTHER PRODUCING WELLS OR OFFSET OPERATORS IN THE AREA. THUS, THERE SHOULD BE NO CORRELATIVE RIGHTS ISSUES THAT NEED ADDRESSED IN REGARD TO APPROVAL OF AN INJECTION PERMIT. THE GAS CONTAINED AT SAN YSIDRO IS STORED GAS AND ALL ROYALTY, SEVERANCE AND OTHER PRODUCTION TAXES HAVE BEEN PAID. THUS, LOCAL, STATE AND FEDERAL REVENUE STREAMS WILL NOT BE AFFECTED. GROUND WATER WILL BE PROTECTED SINCE THERE IS NO FRESH WATER SOURCE WITHIN A ONE MILE RADIUS OF THE PROPOSED INJECTION WELL. THE PROPOSED INJECTION WELL IS NOT BEING PERMITTED AS A COMMERCIAL DISPOSAL FACILITY. ONLY PRODUCED WATER FROM THE AQUA ZARCA FORMATION WILL BE REINJECTED. THUS, CONTAMINATION OF THE RESERVOIR FROM FOREIGN FLUIDS WILL NOT BE A PROBLEM.

CONCLUSION:

BASED ON THE ABOVE ANALYSIS AND DISCUSSION, THE NEED FOR PRODUCED WATER REINJECTION AT THE SAN YSIDRO GAS STORAGE PROJECT IS JUSTIFIED. MECHANICAL FEASIBILITY OF THE INJECTION PLAN IS EVIDENT AND PRESENTS NO MAJOR DIFFICULTY. LONG TERM ENVIRONMENTAL BENEFIT WILL BE REALIZED BY DEPLETING THE RESERVOIR TO AS LOW A PRESSURE AS IS ECONOMICALLY FEASIBLE. NO RESERVIOR DAMAGE WILL OCCUR AS A RESULT OF THE REINJECTION. CORRELATIVE RIGHTS ARE PROTECTED AND NO DETRIMENTAL PUBLIC ECONOMIC IMPACT WILL BE REALIZED. IT IS MY RECOMMENDATION THAT THE PERMIT FOR INJECTION BE APPROVED AND THE PROJECT EXPEDITED.

SINCERELY:

BRADLEY W. SALZMAN

APPLICATION FOR AUTHORIZATION TO INJECT

PUBLIC SERVICE COMPANY OF NEW MEXICO (PNM)

SAN YSIDRO #6

PART XIII. PROOF OF NOTICE

ATTACHED IS PNM'S AFFIDAVIT OF PUBLICATION AND LANDOWNER NOTIFICATION. THE LEGAL ADVERTISEMENT WAS PUBLISHED IN THE ALBUQUERQUE JOURNAL. LAND OWNERS AND LEASEHOLD OPERATORS LOCATED WITHIN ONE-HALF MILE OF THE INJECTION WELL SITE WERE SERVED NOTICE BY CERTIFIED MAIL.

NOTICE

Public Service Company of New Mexico (PNM), 414 Silver Ave. SW, Albuquerque, New Mexico 87158, is making application to the New Mexico Oil Conservation Division for administrative approval to reinject water from natural gas storage wells back into one of those wells. The contact person for questions relating to the water reinjection is Joel Levine, Senior Engineer (505)-241-4527. The proposed disposal site is the San Ysidro #6 well, located 425' FNL & 1420' FWL, Sec. 20, Township 15 North, Range 1East, Sandoval County, New Mexcio. Water will be injected into the Aqua Zarca Sandstone formation between 2208' and 2228'. Maximum injection pressure will be 700 psi. Maximum injection rate is 1095 barrels of water daily. Any interested parties may file objections or requests for hearing with the Oil Conservation Division , 1220 South St. Francis Drive, Santa Fe, New Mexico 87505 within 15 days from the date of publication of this Notice..

BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION

OF	THE MATTER OF THE APPLICATION) PUBLIC SERVICE COMPANY OF) W MEXICO FOR AUTHORIZATION TO INJECT.)
PU	BLIC SERVICE COMPANY OF NEW MEXICO
	Applicant.)
	AFFIDAVIT OF PUBLICATION
STA	ATE OF NEW MEXICO)
СО) ss. UNTY OF BERNALILLO)
	Mary E. Homan, being first duly sworn under oath states as follows:
1.	I am employed by Public Service Company of New Mexico ("PNM") in the capacity of Regulatory Project Manager. In my capacity as such, I am responsible for the publication of notices in connection with the New Mexico Oil Conservation Division ("NMOCD") proceeding in the Application to Inject.
2.	Pursuant to the NMOCD's Form C-108 section XIII, I caused the required notice of this proceeding to be e-mailed on February 8, 2005, to the Albuquerque Journal for publication.
3.	PNM published the notice in the Albuquerque Journal, which is a newspaper of general circulation available in every county within the State of New Mexico and hence in Sandoval County where PNM's San Ysidro storage unit and the requested injection site are located.
4.	Publication was made on February XX, 2005 in the Albuquerque Journal, as shown in the attached Exhibit A, which contains the original Affidavit of Publication from the newspaper.
	Mary E. Homan Regulatory Project Manager SUBSCRIBED AND SWORN to before me this day of February 2005, by Mary E. Homan.
	Sara E. Dolan Notary Public
Μv	Commission Expires

February , 2005

CERTIFIED – RETURN RECEIPT REQUESTED

Mr. and Mrs. David Lucero P.O. Box 196 San Ysidro, New Mexico 87053

Re: Notice of Intent to Convert Salt Water Disposal Well

Dear Mr. and Mrs. Lucero:

Public Service Company of New Mexico ("PNM") has filed an application for administrative approval to convert the San Ysidro #6 well (Sec. 20, T15N, R1E, 625' FNL & 1420' FWL, Sandoval County, NM) from a natural gas storage well to a salt water disposal well. Injection will be in to the Aqua Zarca Sandstone formation located between 2208' to 2228'. A copy of the application is attached.

As surface owner of the land within one-half mile upon which the injection well is located (Sec. 20, T15N, R1E) the New Mexico State Land Office is being notified of this application. If you wish to object or request the matter for hearing, you must contact the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, NM 87505 within 15 days.

If you have any questions or need additional information concerning this application, please contact me.

Sincerely,

Joel Levine (505) 241-4527

cc: Mary Homan - PNM

DCC

lcb3053

February_, 2005

CERTIFIED – RETURN RECEIPT REQUESTED

Mr. Frank Chavez New Mexico Oil Conservation Division 1000 Rio Brazos Road Aztec, New Mexico 87410

Re: Application For Authorization To Inject, Disposal Well, San Ysidro #6, Sandoval County, New Mexico

Dear Mr. Chavez:

Enclosed is Public Service Company of New Mexico's ("PNM") application for administrative approval to dispose produced water in the San Ysidro #6 well. In fulfilling the requirements of this application, the following materials are provided:

- 1. Form C-108, Application for Authorization to Inject
- 2. Tabular and schematic data on proposed injection well
- 3. Lease and surface owner maps that identify all wells and leases within 2 miles of proposed injection well with one-half (1/2) radius circle drawn around the proposed injection
- 4. Data sheet of wells within 2 miles of proposed injection well, highlighting those wells inside one-half mile radius around the injection well
- 5. Operations plan for proposed injection well
- 6. Water Analysis of produced water to be disposed in proposed injection well (Aqua Zarca formation)
- 7. Water Analysis of water from proposed injection zone (Aqua Zarca formation)
- 8. Required geologic, stimulation, logging, and test data and fresh water data from nearby wells

- 9. Signed statement of geologic and engineering analysis.
- 10. Proof of Notice in the form of notification letters sent to offsetting operators, signed receipt cards and a copy of the Affidavit of Publication with a copy of publication as appeared in the *Albuquerque Journal*.

If you have any questions or need additional information, please contact me.

Sincerely,

Joel Levine (505) 241-4527

Attachments

cc: NMOCD – Santa Fe
Ms. Debbie Padilla – New Mexico State Land Office
Mr. Jim Lovato – Bureau of Land Management
Mary Homan – PNM
DCC

February , 2005

CERTIFIED – RETURN RECEIPT REQUESTED

Ms. Gregorita Sandoval 9511 Modesto NE Albuquerque, New Mexico 87112

Re: Notice of Intent to Convert Salt Water Disposal Well

Dear Ms. Sandoval:

Public Service Company of New Mexico ("PNM") has filed an application for administrative approval to convert the San Ysidro #6 well (Sec. 20, T15N, R1E, 625' FNL & 1420' FWL, Sandoval County, NM) from a natural gas storage well to a salt water disposal well. Injection will be in to the Aqua Zarca Sandstone formation located between 2208' to 2228'. A copy of the application is attached.

As surface owner of the land within one-half mile upon which the injection well is located (Sec. 20, T15N, R1E) the New Mexico State Land Office is being notified of this application. If you wish to object or request the matter for hearing, you must contact the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, NM 87505 within 15 days.

If you have any questions or need additional information concerning this application, please contact me.

Sincerely,

Joel Levine (505) 241-4527

Attachments

cc: Mary Homan – PNM

DCC

.

.

February ___, 2005

CERTIFIED – RETURN RECEIPT REQUESTED

Ms. Debbie Padilla New Mexico State Land Office Post Office Box 1148 Santa Fe, New Mexico 87504

Re: Notice of Intent to Convert Salt Water Disposal Well

Dear Ms. Padilla:

As surface owner of the land within 2 miles upon which the injection well is located on Section 20, Township 15 North, Range 1 East, the New Mexico State Land Office is being notified of this application. If you wish to object or request the matter for hearing, you must contact the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, within fifteen (15) days.

If you have questions or need additional information concerning this application, please contact me.

Sincerely,

Joel Levine (505) 241-4527

Attachments

cc: Mary Homan – PNM

DCC

February, 2005
CERTIFIED – RETURN RECEIPT REQUESTED
Mr. Jim Lovato Bureau of Land Manager
Farmington, New Mexico
Re: Notice of Intent to Convert Salt Water Disposal Well
Dear Mr. Lovato:
As surface owner of the land which the injection well is located on Section 20, Township 15 North, Range 1 East, the New Mexico State Land Office is being notified of this application. If you wish to object or request the matter for hearing, you must contact the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, within fifteen (15) days.
If you have questions or need additional information concerning this application, please contact me.
Sincerely,
Joel Levine (505) 241-4527
Attachments

lcb3053

cc:

Mary Homan – PNM DCC PNM Alvarado Square Albuquerque, NM 87158-0920 505 241-2700 Fax 505 241-2386 www.pnm.com

RECEIVED

MAR 2 8 2005

OIL CONSERVATION DIVISION

a new garages as

March 25, 2005



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

Re: Affidavit of Publication - San Ysidro #6 Well Reinjection

Dear Mr. Jones:

Enclosed is an affidavit of publication for Public Service Company of New Mexico's ("PNM") requested authorization to inject. As reflected in the Albuquerque Journal publication, dated March 10, 2005, the notice language was updated to reflect the revised name of the injection zone ("Mesita Blanca member of the Yeso formation, formerly known as the Aqua Zarca Sandstone formation").

If you have any questions or require any additional information, please do not hesitate to contact Mary Homan at (505) 241-4797. Thank you for your assistance in this matter.

Sincerely,

Mary E. Homan

Manager, Regulatory Projects

Enclosures

cc: Joel Levine – MS 2610

DCC - MS 0900

BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLIC OF PUBLIC SERVICE COMPANY NEW MEXICO FOR AUTHORIZAT	OF)	
PUBLIC SERVICE COMPANY OF	NEW MEXICO	
Applicant.	;	
	AFFIDAVIT OF PUBLI	CATION
STATE OF NEW MEXICO	00	
COUNTY OF BERNALILLO)	SS.	
Mary E. Homan, being first	duly sworn under oath st	ates as follows:

- 1. I am employed by Public Service Company of New Mexico ("PNM") in the capacity of Regulatory Project Manager. In my capacity as such, I am responsible for the publication of notices in connection with the New Mexico Oil Conservation Division ("NMOCD") proceeding in the Application to Inject.
- 2. Pursuant to the NMOCD's Form C-108 section XIII, I caused the required notice of this proceeding to be e-mailed on March 8, 2005, to the Albuquerque Journal for publication.
- 3. PNM published the notice in the Albuquerque Journal, which is a newspaper of general circulation available in every county within the State of New Mexico and hence in Sandoval County where PNM's San Ysidro storage unit and the requested injection site are located.
- 4. Publication was made on March 10, 2005 in the Albuquerque Journal, as shown in the attached Exhibit A, which contains the original Affidavit of Publication from the newspaper.

Mary E. Homan

Regulatory Project Manager

SUBSCRIBED AND SWORN to before me this 25th day of March 2005, by Mary E. Homan.

Sara E. Dolan Notary Public

My Commission Expires Way 24, 2008

OFFICIAL SEAL
SAPA E. DOLAN
Notary Public
State of New Mexico
My Commission Expires 5/24/08

Bill Tafoya, being duly sworn, declares and says that he is Classified Advertising Manager of The Albuquerque Journal, and that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Session Laws of 1937, and that payment therefore has been made of assessed as court cost; that the notice, copy of which is hereto attached, was published in said paper in the regular daily edition, for times, the first publication being on the day of the subsequent consecutive publications on

Sworn and subscribed to before me, a Notary Public, in and for the County of Bernalillo and State of New Mexico this 2 day of March of 2005

PRICE 5 1 6 H 4
Statement to come at end of month.

ACCOUNT NUMBER <u>C88190</u>

. . .

Public Service Company of New Mexico, 414 Silver Ave., SW. Albuquerque, New Mexico 87158, is making application to the New Mexico Oil Conservation Division for administrative approval to reinject water from natural gas storage wells back into those wells. The wells back into those wells. The contact person for questions relating to the reinjection is Joel Levine. Senior Engineer (505) 241-4527. The proposed disposal site is the San Ysidro #6 well, located 426' FNL & 1420' FWL, Sec. 20. Township 15 North, Range 1. East, Sandoval County, New Mexico. Water will be injected into the Mesita Blanca member of the Yeso formation, formerly known as the Aqua Zarca Sandstone formation, between 2208' and 2310'. Maximum injection pressure will be 400 psi. Maximum injection rate will be 1095 barrels of water daily. Any interested parties may file ob-Will be 1095 barrels of water daily.
Any interested parties may file objections or requests for hearing with the New Mexico Oil Conservation Division, 1220 South St.
Francis Drive, Santa Fe, New Mexico 87505 within 15 days from the date of publication of this No-

Journal: March 10, 2005

. 20

OFFICIAL SEAL

Elyn Sloane

NOTARY PUBLIC STATE OF NEW MEXICO

My Commission Expires: 4.56

M

CLA-22-A (R-1/93)

* * * Proof * * *

Albuquerque Publishing Company 7777 Jefferson NE Albuquerque, NM 87109 (505)823-7777

Account Information -

Phone: (505) 241-2569

Name: PNM Account #: C88190

Address: ALVARADO SQUARE MS 0920

ALBUQUERQUE, NM 87158

Client:

Placed by: sara dolan

Fax #:

- Ad Information

Classification: 0001-Legals - Non -

Size: 1 x 35.000

Government

Start date: 03-10-05

Billed size: 35.00 lines-6.5pt Ad#: 1687013

Stop date: 03-10-05

Insertions: 1

Ad type: Liner Ad

Rate code: Non-Government

Le-

gals

Publications: Journal Daily (AM)

Ad Cost:

\$ 15.40

Tax @ 6.7500%: Tax @ 7.3125%: \$ 1.04 \$

Tax @ 7.0625%:

\$

Total:

\$ 16.44

Ad Copy:

NOTICE

Public Service Company of New Mexico, 414 Silver Ave., SW, Albuquerque, New Mexico 87158, is making application to the New Mexico Oil Conservation Division for administrative approval to reinject water from natural gas storage wells back into those wells. The contact person for questions relating to the reinjection is Joel Levine, Senior Engineer (505) 241-4527. The proposed disposal site is the San Ysidro #6 well, located 425' FNIL & 1420' FWIL. Sec. 20, Township 15 North, Range 1 acts, Sandoval County, New Mexico. Water will be injected into the Mesita Blanca member of the Yeso formation, tomenty known as the Aqua Zarca Sandstone formation, between 2208' and 2310'. Maximum injection pressure will be 1095 barrels of water daily. Any interested parties may file objections or requests for hearing with the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505 within 15 days from the date of publication of this Notice. tice. Journal: March 10, 2005