

Submit 3 Copies
to Appropriate
District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

cc: 3 OCD
1 Well File

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Santos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL API NO. 30-045-27342
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Santa Fe 20
8. Well No. #4
9. Pool name or Wildcat Snake Eyes Dakota

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	
1. Type of Well: OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER	
2. Name of Operator MERRION OIL & GAS CORPORATION	
3. Address of Operator P. O. Box 840, Farmington, NM 87499	
4. Well Location Unit Letter <u>I</u> : <u>2310</u> Feet From The <u>South</u> Line and <u>990</u> Feet From The <u>East</u> Line Section <u>20</u> Township <u>21N</u> Range <u>8W</u> NMFM San Juan County	
10. Elevation (Show whether DF, RKB, RT, GR, etc.) 6576' GL 6588' KB	

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data	
NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>
OTHER: <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
	CASING TEST AND CEMENT JOB <input type="checkbox"/>
	OTHER: <input type="checkbox"/> Well History <input checked="" type="checkbox"/>

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Attached please find a copy of the well history for the above well.

RECEIVED
AUG 08 1991
OIL CON. DIV.
DIST. 3

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE George F. Sharpe TITLE Engineer DATE 8/7/91
TYPE OR PRINT NAME George F. Sharpe TELEPHONE NO. 327-9801

(This space for State Use)

APPROVED BY Original Signed by FRANK T. CHAVEZ TITLE SUPERVISOR DISTRICT # 3 DATE AUG 08 1991

CONDITIONS OF APPROVAL, IF ANY:

SANTA FE 20 NO. 4

July 15, 1989 - Day No. 1

TD: 312' KB

Current operation: drilling

MIRU Four Corners Rig No. 6. Drilled rat hole and mouse hole, spud 12-1/4" surface hole to 226' K.B. Ran 211' of 9-5/8" 36#/ft buttress thread casing. Top jt w/ 8 rd slip collar welded on for Huber csg head. Rigged up Dowell and water truck. Mixed and pumped 110 sx Class "G" cement w/ 2% CaCl. displaced w/ 15 Bbls. No cement to surface. Ran 1" tbg in annulus and tagged cement @ 40'. Mixed and pumped 50 sx cement and got good cement to surface. SWI. Plug down @ 4:45 p.m. WOC 10 hrs. (CCM) 12-1/4" bit #1. 8-3/4" bit #2. Mud weight 8.5, viscosity 32, water loss 10. Surveys run as follows: 95' - 1/2°; 214' - 1-1/4° (Four Corners Drilling)

July 16, 1989 - Day No. 2

TD: 2300'

Current operation: drilling

Mud weight 9.1, viscosity 34, water loss 8. Surveys run as follows: 464' - 3/4°; 866' - 1°; 1179' - 1°; 1794' - 1-3/4°; 2,042' - 1°. (Four Corners Drilling)

July 17 - Day No. 3

TD: 3,345'

Current operation: drilling

Mud weight 8.9, viscosity 32, water loss 10. Surveys run as follows: 2,542' - 1°; 3,042' - 2-1/2°; 3,074' - 2-1/2°; 3,230' - 1-1/4°

GEOLOGICAL REPORT

July 17, 1989

TD: 3,380'

Current operation: drilling

Progress: 1020' in the last 24 hours @ rate of 37'/hr. Continuing to drill with bit #2. Mud log tops: Point Lookout - 2,440'; Mancos - 2,645'; Gallup - 3,334'. No mudlog shows reported. (MKM)

July 18, 1989 - Day No. 4

TD: 3,875'

Current Operation: drilling

Drilled 530' in last 24 hours

Mud weight 8.9, viscosity 38, water loss 9. (Four Corners Drilling)

Mud Weight: 8.8, viscosity 38, water loss 9.2. Survey 5,095'- 1°
(Four Corners Drilling)

July 23, 1989 - Day No. 9

TD: 5,670'

Current Operations: Drilling

Mud Weight: 9.0, viscosity 42, water loss 7.6. (Four Corners Drilling).

July 24, 1989 - Day No. 10

TD: 5,699'

Current Operations: Picking up drill pipe - going in to spot cement plug.

Mud Weight: 9.0, viscosity 42, water loss 7.6. (Four Corners Drilling).

DETAIL: Condition hole for logging. POH w/ drill string. RU Welox. Ran Induction - Density - Neutron - Sonic logs. Rig down loggers. Lay down drill collars. RIH w/ drill pipe open ended. Preparing to plug back from Entrada.

July 26, 1989 - Day No. 12

Waiting on cement. Final Drilling Report.

MERRION OIL & GAS CORPORATION

MORNING REPORT

July 25, 1989

CURRENT POSITION NO. EPNG 4893 (July Schedule) (7/1/89)
NWPL 1 (July Schedule) (7/1/89)

DRILLING

SANTA FE 20 NO. 4

July 25, 1989 - Day No. 11

Rigged down Welex. TIH w/ drill collars. Layed down all drill collars. TIH w/ drill pipe open ended to 5,690' and spotted 75 sx class "G" cement w/ 0.1% D-13 retarder up to 5,490' K.B. TOH laying down drill pipe. Nippled down BOP's and changed the wellhead. Nippled up BOP's. Started running csg. First 70 jts - 4.5" 11.6#/ft K-55 L.T. & C. Remainder - 4.5" 11.6#/ft K-55 S.T. & C. Csg string as follows:

<u>ITEM</u>	<u>LENGTH</u>	<u>DEPTH ' K.B.</u>
Cement nose guideshoe	.80'	4,296.18 K.B.
Jt. #1 shoe jt.	41.20'	
Orifice fill float collar	1.68'	4,252.50 K.B.
49 jts. 4.5" 11.6#/ft csg	2,017.57'	
Stage tool	1.68'	2,233.25 K.B.
55 jts. 4.5" csg.	<u>2,238.25'</u>	5' above K.B.
Total string length	4,301.18'	

Circulated 1.5 hours and thinned mud back to 40 sec. viscosity. Cement 1st stage as follows: Ran 20 Bbls water and 20 Bbls chemical wash ahead of 352 sx class "G" 2% gel cement. Shut down. Washed up pump and lines. Dropped plug and displace with mud and water. Bumped plug. Bled pressure off and float held good. Dropped opening bomb. Circulated 7 hours between stages. Cemented the 2nd stage as follows: 15 Bbls water ahead of lead cement of 450 sx class "G" 2% D-79 (chemical extender), mixed @ 12.6#/gal. with yield of 2.04 cu. ft/sk. Tail in w/ 50 sx class "G" neat. Shut down - dropped plug. Displaced with 34.7 Bbls of water. Circulated 18 Bbls cement back to surface. Plug down @ 12:00 midnight. Bled pressure off, tool closed. Rigged down cementers. Set csg in slips as cemented. Released Rig No. 6. (CCM)

SANTA FE 20 NO. 4

On Report

July 18, 1990

Day No. 1

MIRU. Ram Service Company. Nipple up BOP. PU 3-7/8" bit and bit sub on 2-3/8" EUE tbg. Tagged cement @ 2,153' K.B. Drilled cement to D.V. Tool @ 2,233' K.B. Pressure test @ 3,000 psi. - held good. SDON. (CCM)

July 19, 1990

Day No. 2

Finished drilling cement and Stage Tool @ 2,233' K.B. TIH drilled 10' cement above float collar @ 4,255' K.B. Test to 3,000 psi. - okay. Drilled out float and shoe joint and fell through @ 4,299' K.B. Circulated clean. Pulled clear of open hole. Mixed drilling mud and circulated hole. SWI. SDON. (CCM)

Daily Cost: \$2,950

July 20, 1990

Day No. 3

Summary: Cleaned out open hole to 4,790' K.B.

Detail: Mixed 40 vis mud. Washed dwn from 4.5" csg. Shoe @ 4,300' K.B. to 4,625' K.B. Lost circ. 2 Bbls or got tight, worked free. Pulled into csg, circ heavy cuttings out of the hole. TIH. Circ 40 min @ 4,430 K.B. Ran to 4,625' K.B., circ clean. Ran to 4,790' K.B., worked through small bridge, circ 1 hr. Pulled tbg and bit back into csg, circ 30 min. SWI. SDON. (CCM)

July 21, 1990

Day No. 4

Summary: Washed dn. from 4,650' - 4,680' K.B.. Installed shale shaker to clean up mud.

Detail: TIH. 4,650' K.B. started cleaning out open hole, carrying a lot of cuttings through the pits. and pumping cuttings back dn. hole. Installed shale shaker w/ 3 phase power, pulled into csg. from 4,680' K.B. Circ. clean. SDON. (CCM)

SANTA FE 20 NO. 4

July 22, 1990

Day No. 5

Summary: Installed generator and cleaned mud in the pits. SDOWE.

Detail: Delivered and hooked-up 3-phase generator to run the shale shaker. Got mud in pits cleaned up and generator had mechanical and electrical problems. SDOWE. (CCM)

July 24, 1990

Day No. 6

Summary: Cleaned out open hole from 4,680' - 4,920' K.B.

Detail: Hauled out another 3-phase generator and circulated mud clean. TIH to 4,680' K.B.. Cleaned out to 4,920' K.B. Circ. clean, TOH w/ 2-3/8" EUE tbg and 3-7/8" bit._ (CCM)

July 25, 1990

Day No. 7

Summary: Ran and cemented 2-7/8" liner w/ liner hanger.

Detail: Ran 2-3/8" tbg w/ saw-tooth collar w/ 5-9.5" wall scratchers. Worked pipe up & dn through open hole. Circ clean @ 4900' KB. TOH w/ 2-3/8" tbg. Ran 2-7/8" liner as follows:

Baker type V-shoe	1.37	4900' KB
Landing Collar	.83	4897.80 KB
2-7/8" EUE x NUE XO	.41	
29 jts 2-7/8" NUE liner	701.01	
Baker liner hanger	6.95	4189.43
Setting tool	.76	
132 jts 2-3/8" EUE tbg	<u>4182.59</u>	6.08' below KB
Total String	4893.92	

Hung liner & cemented w/ Dowell as follows: pump 40 Bbls water & 20 Bbls chemical wash ahead of 300 sx Cl "G" 50-50 POZ, 2% D-20, 10% D-44, 0.6% D-112, 1.22 cf/ sk, 13.9#/ gal, 65.2 Bbls slurry. SD. Drop plug, displace w/ 19.9 Bbls water. Bumped plug to 2000 psi. Released press., float held good. Got off liner top. TOH w/ 2-3/8" tbg & setting tool. SWI. SDON. (CCM)

SANTA FE 20 NO. 4

July 26, 1990

Day No. 8

Summary: Drilled out cement to liner top.

Detail: TIH w/ 3-7/8" bit and 2-3/8" tbg. Tag cement 3850'. Drilled out cement to 4196' (346' cement). Circ hole clean. TOOH. Tally and pickup 2-1/4" drag bit on 24 jts of 1-1/2" NU tbg. Ran 2 stands of 2-3/8" tbg. SDON. (Cement soft, samples soft.) (ARM)

July 27, 1990

Day No. 9

Summary:

Cleaned out cement. Pressure test liner & csg, held good.

Detail:

Ran 795' of 1-1/2" NUE tbg w/ fishtail bit on 2-3/8" EUE tbg. Tagged cement @ 4,196' KB. Drilled 15' cement & fell through & retagged cement & indicating plug @ 4,226' KB. Drilled good cement to 4,887' KB. Circulated clean water into hole & pulled tbg out of liner. Test csg to 3,000 psi, held good. SDON. (CCM)

July 28, 1990

Day No. 10

Summary: Ran Bond log & perforated lower Dakota.

Detail: TOH w/ 2-3/8" EUE tbg & 795' of 1-1/2" NUE tbg w/ 2-1/4" blade bit. RU Schlumberger Logging & ran CBL VDL Gamma ray collar. Log from PB&D 4887' KB through liner top @ 4185' KB and from liner top to TOC @ 2730' KB. Free pipe up to stage tool @ 2233' KB. Perforated lower Dakota in 3 runs, 4666'-4672' KB, 4658'-4662' KB, 4650'-4654' KB, 2 SPF. Broke down perms 4666'-4672' KB. Broke @ 1700 psi. Pump in @ 1300 psi before 2nd and 3rd runs. Note: Held 2,000 psi on casing during bond log. SWI. SDON. (CCM)

SANTA FE 20 NO. 4

July 29, 1990

Day No. 11

Summary: Swab test lower Dakota. Total recovery 185 Bbls.

Detail: TIH w/ SN on 2-3/8" EUE tbg to 4150' KB. Swabbed total of 185 Bbls in 32 runs fl. from surface to stabilize @ 1300' KB.

Swabbed 85 Bbls in 2 hrs after FL stable. Got lower Dakota water sample & analyzed for possible fracing. (Some gas cut fluid during swab run, but no blow after run.) SWI. SDOWE. (CCM)

July 31, 1990

Day No. 12

Summary: Swab 81 Bbls H₂O from 4,650'-4,672' KB. Set RBP @ 4,645', perf middle Dakota 4,620-4,630' KB. Swab casing, load.

Work Detail: OPCI tbg, tst & psi csg. SI, FL 200' KB. RUTS. Swab 81 Bbls formation water, 9 runs, 1 hr. 45 min. Final level 800 ft. POH. Pick up Schulumberger 2-7/8" Bobcat RBP. RIH w/ 24 jts. of 1-1/2" NUE 2.75 lb/ft tbg & 121.5 jts of 2-3/8" EUE 4.7 lb/ft tbg. Set RBP @ 4,634' KB. Pressure test to 1000 psi. POH. RU Petro Wireline, perforate middle Dakota 4,620'-4,630' KB w/ 2 SPF (2" gun) per density log. Broke down w/ water @ 2,600 psi. Pump est. 6-8 Bbls @ 1700 psi, 2 BPM. ISIP - 1500 psi. Down to 450 psi, 5 min. RIH w/ 2-3/8" tbg to 4,074' KB. RUTS. Swab 38 Bbls H₂O in 5 runs. FL @ surface, down to 1500' final run. SD due to high winds. (SSD)

August 1, 1990

Day No. 13

Summary: Swab test Middle Dakota 4620'-30' KB, rec 130 bbls wtr, no gas.

Work Detail: SIP 20 psi/30 psi. IFL 200'. Swab test. Total rec 130 bbls wtr, no gas. FFL @ 3000'. Final inflow rate 575 BPD. Caught sample for analysis. POH. RIH with RH. Unset RBP @ 4634' KB. POH. RIH open ended to 4690' KB. Preparing to spot cement. SDON. (SSD).

SANTA FE 20 NO. 4

August 2, 1990

Day No. 14

4

Summary: Squeezed lower & middle Dakota, perfs 4,620' - 2,672' KB.

Detail: RU Halliburton. Spotted 25 sx Cl "H" Neat cement from 4,694' KB, 15.8#/ gal, 1.15 cu ft/ sk, 5.1 Bbls of slurry. Pulled tbg to 4,078' KB, reversed clean, got back 1.0 Bbl of cement. Pumped .5 Bbl H₂O dn csg, 2,500 psi, bled pressure off, pulled 10 st. Pumped to 3,000 psi, moving no fluid, surged back twice. Still could not move cement @ 3,000 psi. TOH w/ tbg. TIH w/ 3-7/8" bit. Cleaned out cement from 4,078' KB to liner top @ 4,189' KB. TOH w/ 2-3/8" tbg & bit. (CCM)

August 3, 1990

Day No. 15

Summary: Drilled out lower & middle Dakota - squeeze to 4647' KB; test to 1500 psi.

Detail: TIH w/ 2-1/4" bit on 795.65' of 1-1/2" NUE tbg & 2-3/8" tbg. Cleaned out cement from liner top to 4647' KB. Pressure test to 1500 psi, held good. Swabbed FL to 2000' KB. TOH w/ tbg & bit. SDON. (CCM)

August 4, 1990

Day No. 16

Summary: Perforated & tested upper Dakota 4585' - 4587' KB. 725 mcf/ day, 16 Bbls H₂O/ hr.

Detail: RU Petro Wireline. FL @ 2400' KB. Perf upper Dakota 4585' - 4587' KB per OH Density log, 4 SPF. Csg blew slightly for 10 min & died. TIH w/ 2-3/8" EUE tbg w/ saw-tooth collar. SDON. Bttm 15' above liner top. Tbg & csg came in flowing.

Tested well as follows: Csg SI flowed 2" tbg 4 hrs to clean up, making 16 Bbls water/ hr, csg 225 psi. Installed orifice tester, making 725 MCF/ day. Heavy mist of water & slugging. Test well over weekend. SDOWE. (CCM)

SANTA FE 20 NO. 4

August 5, 1990

Day No. 17

Summary: Csg 800 psi, tbg 20-40 psi, 522 mcf/d. Heavy mist of H₂O.

Detail: Pumper checked well. Csg 800 psi, tbg flowing through tester @ 20-40 psi through 3/4" plate avg 522 mcf/d. Heavy mist & slugging. (CCM)

August 6, 1990

Day No. 18

Summary: Csg 700 psi, tbg 60-65 psi, through 3/4" plate steady heavy mist, 872 mcf/d. (CCM)

August 7, 1990

Day No. 19

Summary: Csg 725 psi, tbg flowing 1150 Mcf/D, heavy, steady mist. Landed tbg. RD.

Detail: Landed tbg in wellhead w/ donut @ 4187' KB. SN @ 4178' KB w/ 132 jts of 2-3/8" EUE 4.7 #/ft tbg. RD. (CCM)

August 8, 1990

Day No. 20

Moved to Federal 15-2H. (CCM)